SAR TEST REPORT

Report No. 2012SAR150

FCC ID: Q78-ZTEV788

Applicant: ZTE Corporation

Product: WCDMA/GSM （ GPRS ） Dual-Mode Digital Mobile Phone

Model: ZTE V788

HW Version: y50A

SW Version: GB_AM_P752A11V1.0.0B01

Prepared by: _____   Date: _____
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Xue Jianguo   2012.5.18

Approved by: _____   Date: _____
Wang Jianrong   2012.5.18

Note:

The following test results relate only to the devices specified in this report. This report shall not be reproduced except in full without the written approval of the test laboratory.

V2.0

General Information

Product Name	WCDMA/GSM（GPRS）Dual-Mode Digital Mobile Phone	Model Name	ZTE V788
Applicant	ZTE CORPORATION		
Manufacturer	ZTE CORPORATION		
Applicable Standard	**ANSI/IEEE C95.1-2005** Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields. 3 kHz to 300 GHz		
	ANSI/IEEE C95.3-2002 Recommended Practice For Measurements and Computations of Radio Frequency Electromagnetic Fields with Respect to Human Exposure to such Fields. 100 kHz-300 GHz		
	IEEE Std 1528™-2003: IEEE Recommended Practice for Determining the Peak Spatial-Average Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques		
	OET Bulletin 65-(Edition 97-01) Supplement C（edition01-01） Evaluating Compliance with FCC Guidelines for Human Exposure to Radiofrequency Electromagnetic Fields---Additional Supplement C (Edition 01-01)Information for Evaluating Compliance of Mobile and Portable Devices with FCC Limits for Human Exposure to Radiofrequency Emissions		
Test Results	Pass		

Change History

Version	Change Contents	Author	Date
V1.0	First edition	Yin xiaoming	2012-04-25
V2.0	Retest Data Mode for GSM	Yin xiaoming	2012-05-18

CONTENTS:

1. Test Laboratory

1.1 Testing Location:

Company: Shanghai Tejet Communications Technology Co., Ltd Testing Center.
Address: Room 6205-6208, Building 6, No.399 Cailun Rd. Zhangjiang Hi-Tech Park, Shanghai, China
Post Code :   210203
Tel: +86-21-61650880
Fax: +86-21-61650881
Website: www.tejet.cn

1.2 Laboratory Environment

Temperature   20° C～ 25 ° C
Relative humidity   20%～70%

1.3 Testing date

Test start data：2012-04-19
Test end data： 2012-05-17

2. Client Information

2.1 Applicant information

Company Name: ZTE Corporation
Address: ZTE Plaza ,Keji Road South ,Hi-Tech Industrial Park ,Nanshan District, Shenzhen, Guangdong,518057,P.R.China
Post Code :   518057
Country: China
Tel: 021-68897541
Fax: 021-50801070

2.2 Manufacturer Information

Company Name: ZTE Corporation
Address: ZTE Plaza ,Keji Road South ,Hi-Tech Industrial Park ,Nanshan District, Shenzhen, Guangdong,518057,P.R.China
Post Code :   518057
Country: China
Tel: 021-68897541
Fax: 021-50801070

3.Equipment Under Test (EUT) and Accessory Equipment (AE)

3.1 Information of EUT

Device type	Portable device	
Product name	WCDMA/GSM（GPRS） Dual-Mode Digital Mobile Phone	
Exposure category	Uncontrolled environment / general population	
Device operation configuration:		
Operating mode(s):	GSM850	
	GSM1900	
	WCDMA BAND II/V	
Test modulation	(GSM)GMSK	
GPRS operation Class	B	
GPRS Multislot Class	12	
EDGE Class	12	
DTM	N/A	
AP Support	yes	
Rated output power	GSM850: 33dBm	
	GSM1900: 30dBm	
	WCDMA BAND II/V：24 dBm	
Antenna type:	Internal antenna	
Operating frequency range(s):	Band	Tx(MHz)
	GSM850	824.2～848.8
	GSM1900	1850.2～1909.8
	WCDMA BAND II	1852.4～1907.6
	WCDMA BAND V	826.4～846.6
Power class	GSM900: 4,test with power level 5	
	GSM1900: 1,test with power level 0	
	WCDMA BAND II：3，test with maximum output power	
	WCDMA BAND V：3，test with maximum output power	

Note: Equipment under test (EUT) is WCDMA/GSM（GPRS） Dual-Mode Digital Mobile Phone with internal antenna. It consists of mobile phone ,battery and adaptor and the detail about these is in this report. SAR is tested for GSM850/1900, WCDMA BAND II /V,802.11b/g/n.

3.2 Identification of EUT

EUT ID	SN or IMEI	HW Version	SW Version
TN03	863185010003171	y50A	GB_AM_P752A11V1.0.0B01

*EUT ID: identify the test sample in the lab internally.

3.3 Information Of AE

AE ID*	Description
AE1，	Battery
AE2	Travel Adaptor
AE3	Earphone

AE1

Model	Li3714T42P3h504857-H
Manufacturer	ZTE CORPORATION
Capacitance	1350mAh
Nominal Voltage	3.7V

AE2

Model	STC-A22O501700USBA-Z
Manufacturer	ZTE CORPORATION
Length of DC line	0cm with USB connector

AE3

Model	HMZ4-C4-OMTP
Manufacturer	ZTE CORPORATION
Length of DC line	120cm

*AE ID: is used to identify the test sample in the lab internally.

4. Characteristics of the Test

4.1. Applicable Limit Regulations

ANSI/IEEE C95.1-2005 Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields. 3 kHz to 300 GHz

4.2. Applicable Measurement Standards

ANSI/IEEE C95.3-2002 Recommended Practice For Measurements and Computations of Radio Frequency Electromagnetic Fields with Respect to Human Exposure to such Fields. 100 kHz-300 GHz

IEEE Std 1528™-2003: IEEE Recommended Practice for Determining the Peak Spatial-Average Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques

OET Bulletin 65-(Edition 97-01) Supplement C（edition01-01） Evaluating Compliance with FCC Guidelines for Human Exposure to Radiofrequency Electromagnetic Fields---Additional Supplement C (Edition 01-01)Information for Evaluating Compliance of Mobile and Portable Devices with FCC Limits for Human Exposure to Radiofrequency Emissions

5．Operational Conditions During Test

5.1 General description of test procedures

A communication link is set up with a system simulator by air link，and a call is established. The absolute radio frequency channel number (ARFCN) is allocated to low, middle and high respectively in the case of each band. The EUT is commanded to operate at maximum transmitting power.

Connection to the EUT is established via air interface with CMU200, and the EUT is set to maximum output power by CMU200. The antenna connected to the output of the base station simulator shall be placed at least 50 cm away from the EUT. The signal transmitted by the simulator to the antenna feeding point shall be lower than the output power level of the EUT by at least 30 dB .

5.2 GSM Test Configuration

SAR test for GSM850/1900, a communication link is set up with a system simulator by air link. Using CMU200 the power level is set to "5" in SAR of GSM850，set to "0" in SAR of GSM1900，The tests in the band of GSM 850/1900 are performed in the mode of data transfer function.

5.3 WCDMA Test Configuration

SAR test for WCDMA BANDII/ V, a communication link is set up with a system simulator by air link. Using CMU200 the power level is set to "3" in SAR of WCDMA BAND II/ V,. The tests in the band of WCDMA BAND II/ V, are performed in the mode of RMC 12.2kbps transfer function.

SAR for body exposure configurations in voice and data modes is measured using 12.2kbps RMC with TPC bits configured to all "1's". SAR for other spreading codes and multiple DPDCHn , when supported by the DYT, are not required when the maximum average output of each RF channel, for each spreading code and DPDCHn configuration, are lessthan 1/4 dB higher than those measured in 12.2 kbps RMC. Otherwise , SAR is measured on the maximum output channel with an applicable RMC configuration for the corresponding spreading code or DPDCHn using the exposure configuration that results in the highest SAR with 12.2 kbps RMC. When more than 2 DPDCHn are supported by the DUT, it may be necessary to configure additional DPDCHn for a DUT using FTM(Factory Test Mode) or other chipset based test approaches with parameters similar to those used in 384kbps and 968 kbps RMC.

HSDPA Test Configuration

Body SAR is also measured for HSDPA when the maximum average output of each RF channel with HSDPA active is at least 1/4 dB higher than that measured without HSDPA using 12.2 kbps RMC or the maximum SAR 12.2 kbps RMC is above75% of the SAR limit. Body SAR is measured using an FRC with H-Set 1 in Sub-test 1 and a 12.2 kbps RMC configured in Test Loop Mode 1 , using the highest body SAR configuration in 12.2 kbps RMC without HSDPA.

HSDPA should be configured according to the UE category of a test device. The number of HS-DSCH/HS-PDSCHs, HARQ processes , minimum inter-TTI interval, transport block sizes and RV coding sequence are defined by the H-set f. To maintain a consistent test configuration and stable transmission condition, QPSK is user in the H-set for SAR testing. HS-DPCCH should be configured with a CQI feedback cycle of 4 ms with a CQI repetition factor of 2 to maintain a constant rate of active CQI slots. DPCCH and DODCH gain factors(β_c,β_d), and HS_DPCCH power offset parameters($\triangle$ACK, $\triangle$NACK, $\triangle$CQI) should be set according to values indicated in the Table below. The CQI value is determined by the UE category, transport block size, number of HS_PDSCHs and modulation used in the H-set.

Table 1:Subtest for UMTS Release 5 HSDPA

Sub-set	β_c	β_d	B_d（SF）	B_c/β_d	β_{hs}	CM(dB)
1	2/15	15/15	64	2/15	4/15	0.0
2	12/15	15/15	64	12/15	24/15	1.0
3	15/15	8/15	64	15/8	30/15	1.5
4	15/15	4/15	64	15/4	30/15	1.5

Note 1: $\triangle$ACK, $\triangle$NACK, $\triangle$CQI=8$\Leftrightarrow$Ahs=β_{hs}/β_c=30/15$\Leftrightarrow\beta_{hs}$=30/15c

Note 2: CM=1 forβ_c/β_d=12/15, β_{hs}/β_c=24/15

Note 3: For subset 2 the$\beta_c\beta_d$ ratio of 12/15 for the TFC during the measurement period(TF1,TF0) is achieved by setting the signaled gain factor for the reference TFC (TFC1,TF1) toβ_c=11/15 andβ_d=15/15.

Table 2:Settings of required H-set 1 QPSK in HSDPA mode

Parameter	Unit	Value
Nominal Avg.Inf.Bit Rate	Kbps	534
Inter-TTI Distance	TTI's	3
Number of HARQ Processes	Processes	2
Information Bit Payload	Bitw	3202
Number Code Blocks	Blocks	1
Binary Channel Bits Per TTI	Bots	4800
Total Avaliable SML's in UE	SML's	19200
Number of SML's per HARQ Proc.	SML's	9600
Coding Rate	/	0.67
Number of Physical Channel Codes	Codes	5
Modulation	/	QPSK

Table 3：HSDPA UE category

HS-DSCH Category	Maximum HS_DSCH Codes Received	Minimum Inter-TTI Interval	Maximum Transport Bits/HS-DSCH	Total Channel
1	5	3	7298	19200
2	5	3	7298	28800
3	5	2	7298	28800
4	5	2	7298	38400
5	5	1	7298	57600
6	5	1	7298	67200
7	10	1	14411	115200
8	10	1	14411	134400
9	15	1	25251	172800
1 2	15	1	27952	172800
1 1	5	2	3630	14400
1 2	5	1	3630	28800
1 3	15	1	34800	259200
1 4	15	1	42196	259200
1 5	15	1	23370	345600
1 6	15	1	27952	345600

HSUPA Test Configuration

Sub-test	β_c	β_d	β_d (SF)	β_c/β_d	β_{hs}[1]	β_{ec}	β_{ed}	β_{ed} (SF)	β_{ed} (codes)	CM[2] (dB)	MPR (dB)	AG[4] Index	E-TFCI
1	11/15[3]	15/15[3]	64	11/15[3]	22/15	209/225	1039/225	4	1	1.0	0.0	20	75
2	6/15	15/15	64	6/15	12/15	12/15	94/75	4	1	3.0	2.0	12	67
3	15/15	9/15	64	15/9	30/15	30/15	β_{ed1}: 47/15 β_{ed2}: 47/15	4	2	2.0	1.0	15	92
4	2/15	15/15	64	2/15	4/15	2/15	56/75	4	1	3.0	2.0	17	71
5	15/15[4]	15/15[4]	64	15/15[4]	30/15	24/15	134/15	4	1	1.0	0.0	21	81

Note 1: Δ_{ACK}, Δ_{NACK} and $\Delta_{CQI} = 8 \Leftrightarrow A_{hs} = \beta_{hs}/\beta_c = 30/15 \Leftrightarrow \beta_{hs} = 30/15 * \beta_c$.

Note 2: CM = 1 for β_c/β_d =12/15, β_{hs}/β_c =24/15. For all other combinations of DPDCH, DPCCH, HS- DPCCH, E-DPDCH and E-DPCCH the MPR is based on the relative CM difference.

Note 3: For subtest 1 the β_c/β_d ratio of 11/15 for the TFC during the measurement period (TF1, TF0) is achieved by setting the signaled gain factors for the reference TFC (TF1, TF1) to β_c = 10/15 and β_d = 15/15.

Note 4: For subtest 5 the β_c/β_d ratio of 15/15 for the TFC during the measurement period (TF1, TF0) is achieved by setting the signaled gain factors for the reference TFC (TF1, TF1) to β_c = 14/15 and β_d = 15/15.

Note 5: Testing UE using E-DPDCH Physical Layer category 1 Sub-test 3 is not required according to TS 25.306 Table 5.1g.

Note 6: β_{ed} can not be set directly; it is set by Absolute Grant Value.

applicable only if Maximum Power Reduction (MPR) is implemented according to Cubic Metric (CM) requirements.[37]

5.4 Bluetooth Test Configuration

The Bluetooth transmitter of the device under test can be excluded from stand-alone and simultaneous SAR evaluation, per the requirements from FCC KDB 648474, as follows:

1. The separation between the Bluetooth antenna and the main antenna is 8.4 cm≥5cm

2. The maximum conducted output power of Bluetooth is 8.83mW <2· P(Ref)=24mW.

3. The maximum conducted output power of Bluetooth is 8.83mW <60/f=24.49mW

According to FCC KDB648474, stand along SAR and Simultaneous Transmission SAR are not required.

5.5 Wi-Fi Test Configuration

The Wi-Fi is set to different data rate and channels by the software.

According to KDB648474:

1. The separation between the Wi-Fi antenna and the main antenna is 8.4 cm≥5cm

2.The maximum conducted output power of Wi-Fi is 74.5mW＞2· P(Ref)=24mW.

So stand along SAR is needed。

According to KDB248227

SAR is not required for 802.11g channels when the maximum average output power is less than 0.25dB higher than that measured on the corresponding 802.11b channels.

The AP is supported，

According to KDB941225 D06,

1. The device size is 11.4 cm x 6.2 cm > 9 cm x 5 cm, so test separation distance was 10mm.

2. SAR must be tested for all surfaces and edges with a transmit antenna within 2.5cm, at a test separation distance of 10mm. And also the worst position of head are tested with Wi-Fi keep transmitting.
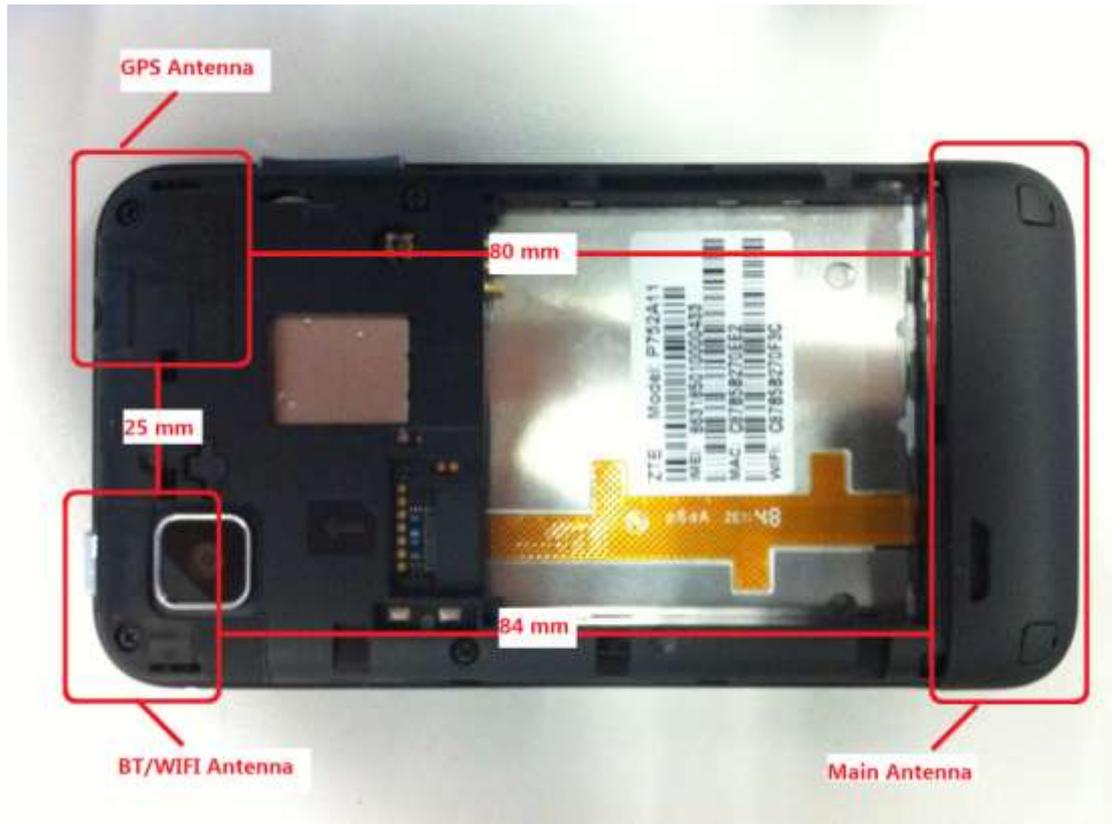
6. SAR Measurements system configuration

6.1 SAR Measurement set-up

The DASY5 system for performing compliance tests consists of the following items:

·A standard high precision 6-axis robot (Staubli TX=RX family) with controller, teach pendant and software. An arm extension for accommodating the data acquisition electronics (DAE).

·An isotropic _field probe optimized and calibrated for the targeted measurement.

·A data acquisition electronics (DAE) which performs the signal amplification, signal multiplexing, AD-conversion, offset measurements, mechanical surface detection, collision detection, etc. The unit is battery powered with standard or rechargeable batteries. The signal is optically transmitted to the EOC.

·The Electro-optical converter (EOC) performs the conversion from optical to electrical signals for the digital communication to the DAE. To use optical surface detection, a special version of the EOC is required. The EOC signal is transmitted to the measurement server.

·The function of the measurement server is to perform the time critical tasks such as signal filtering, control of the robot operation and fast movement interrupts.

·The Light Beam used is for probe alignment. This improves the (absolute) accuracy of the probe positioning.

·A computer running WinXP and the DASY5 software.

·Remote control and teach pendant as well as additional circuitry for robot safety such as warning lamps, etc.

·The generic twin phantom enabling the testing of left-hand and right-hand usage.

·The device holder for handheld mobile phones.

·Tissue simulating liquid mixed according to the given recipes.

· System validation dipoles allowing to validate the proper functioning of the system.
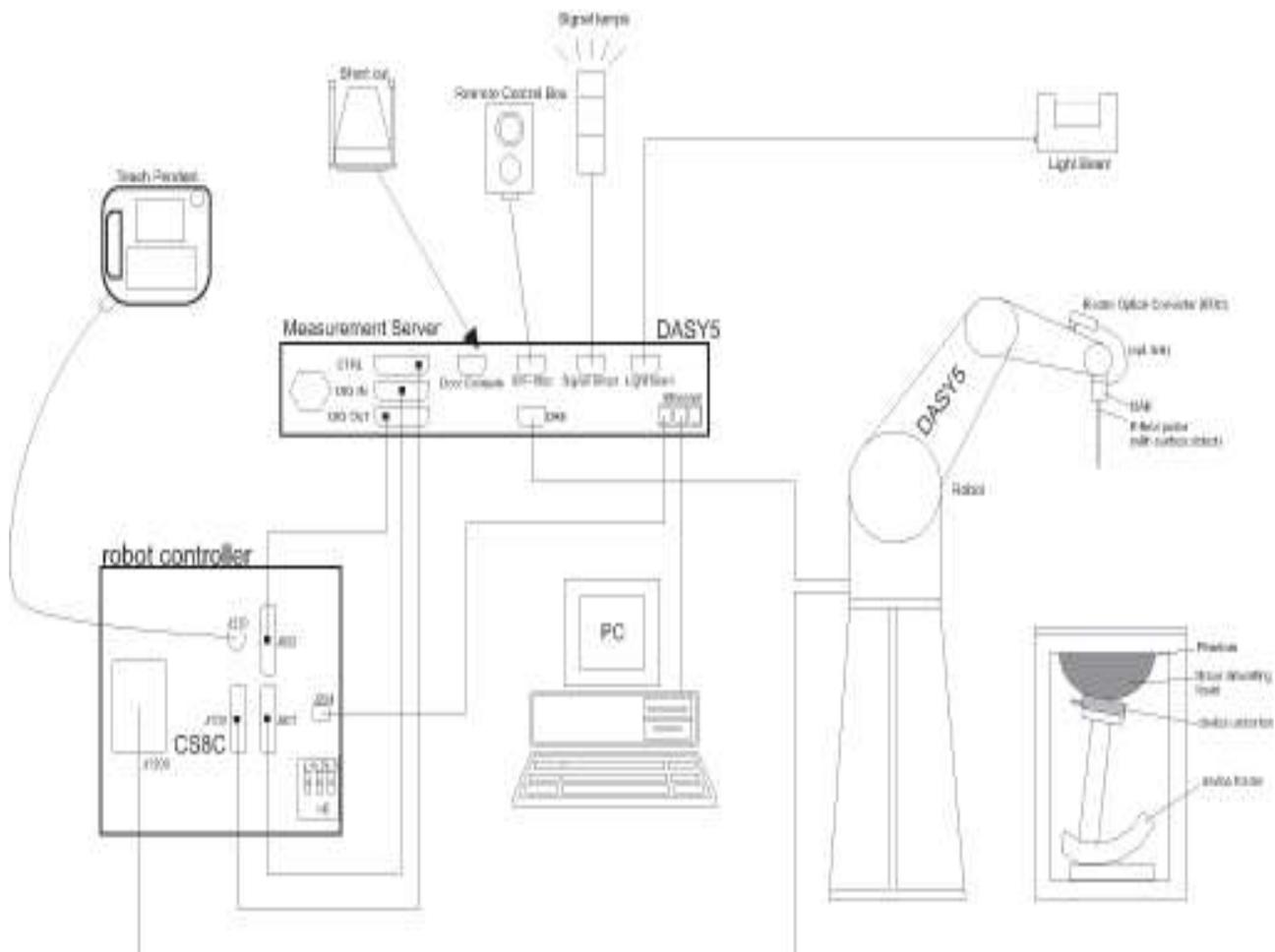
Figure 1. SAR Lab Test Measurement Set-up

6.2. DASY5 E-field Probe System

The SAR measurements were conducted with the dosimetric probe ES3DV3 (manufactured by SPEAG), designed in the classical triangular configuration and optimized for dosimetric evaluation.

6.2.1. Ex3DV3 Probe Specification

Construction	Symmetrical design with triangular core Built-in shielding against static charges PEEK enclosure material (resistant to organic solvents, e.g., DGBE)
Calibration	Basic Broad Band Calibration in air Conversion Factors (CF) for HSL 850 and HSL 1750 Additional CF for other liquids and frequencies upon request
Frequency	10 MHz to > 6 GHz Linearity: ± 0.2 dB (30 MHz to 6 GHz)
Directivity	± 0.3 dB in HSL (rotation around probe axis) ± 0.5 dB in tissue material

(rotation normal to probe axis)

Dynamic Range	10 µW/g to > 100 mW/g Linearity: ± 0.2dB (noise: typically < 1 µW/g)
Dimensions	Overall length: 330 mm (Tip: 20 mm) Tip diameter: 2.5 mm (Body: 12 mm) Typical distance from probe tip to dipole centers: 1 mm
Application	High precision dosimetric measurements in any exposure scenario (e.g., very strong gradient fields). Only probe which enables compliance testing for frequencies up to 6 GHz with precision of better 30%.

Figure 2.ES3DV3 E-field Probe

Figure 3. ES3DV3 E-field probe

6.2.2. E-field Probe Calibration

Each probe is calibrated according to a dosimetric assessment procedure with accuracy better than ±10%. The spherical isotropy was evaluated and found to be better than ± 0.25dB. The sensitivity parameters (NormX, NormY, NormZ), the diode compression parameter (DCP) and the conversion factor (ConvF) of the probe are tested.

The free space E-field from amplified probe outputs is determined in a test chamber. This is performed in a TEM cell for frequencies bellow 1 GHz, and in a wave guide above 1 GHz for free space. For the free space calibration, the probe is placed in the volumetric center of the cavity and at the proper orientation with the field. The probe is then rotated 360 degrees.

E-field temperature correlation calibration is performed in a flat phantom filled with the appropriate simulated brain tissue. The measured free space E-field in the medium correlates to temperature rise in a dielectric medium. For temperature correlation calibration a RF transparent thermistor-based temperature probe is used in conjunction with the E-field probe.

$$SAR = C \frac{\Delta T}{\Delta t}$$

Where: Δt = Exposure time (30 seconds),
C = Heat capacity of tissue (brain or muscle),

ΔT = Temperature increase due to RF exposure.

Or

$$SAR = \frac{|E|^2 \, \sigma}{\rho}$$

Where:

σ = Simulated tissue conductivity,

ρ = Tissue density (kg/m3).

6.3. Other Test Equipment

6.3.1. Device Holder for Transmitters

The DASY5 device holder is designed to cope with the die rent positions given in the standard. It has two scales for device rotation (with respect to the body axis) and device inclination (with respect to the line between the ear reference points). The rotation centers for both scales is the ear reference point (ERP). Thus the device needs no repositioning when changing the angles. The amount of dielectric material has been reduced in the closest vicinity of the device, since measurements have suggested that the inference of the clamp on the test results could thus be lowered.
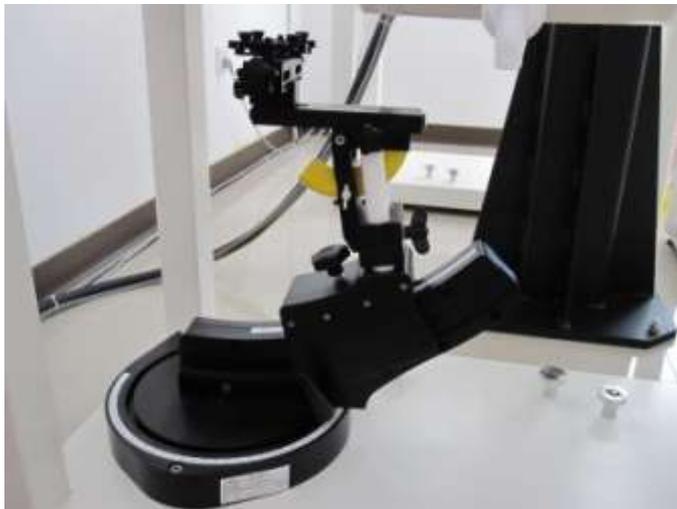

Figure 4.Device Holder

6.3.2. Phantom

The Generic Twin Phantom is constructed of a fiberglass shell integrated in a wooden Figure. The shape of the shell is based on data from an anatomical study designed to determine the maximum exposure in at least 90% of all users. It enables the dosimetric evaluation of left and right hand phone usage as well as body mounted usage at the flat phantom region. A cover prevents the evaporation of the liquid. Reference markings on

the Phantom allow the complete setup of all predefined phantom positions and measurement grids by manually teaching three points in the robot.

Shell Thickness   2±0.1 mm
Filling Volume   Approx. 20 liters
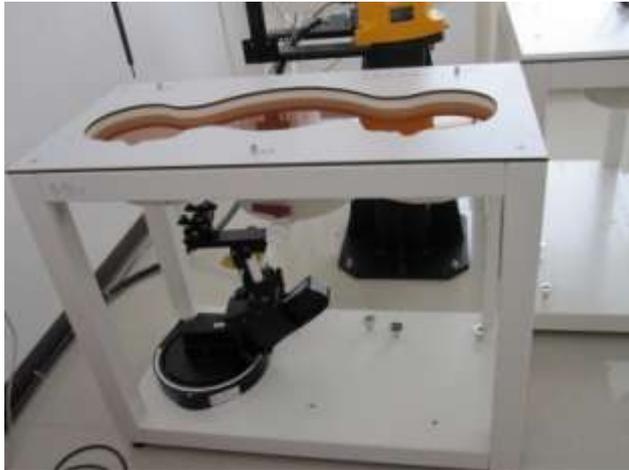Dimensions   810 x l000 x 500 mm (H x L x W)
Aailable   Special

Figure 5.Generic Twin Phantom

6.4. Scanning procedure

The DASY5 installation includes predefined files with recommended procedures for measurements and validation. They are read-only document files and destined as fully defined but unmeasured masks. All test positions (head or body-worn) are tested with the same configuration of test steps differing only in the grid definition for the different test positions.

 • The "reference" and "drift" measurements are located at the beginning and end of the batch process. They measure the field drift at one single point in the liquid over the complete procedure. The indicated drift is mainly the variation of the DUT's output power and should vary max. ± 5 %.

 • The "surface check" measurement tests the optical surface detection system of the DASY5 system by repeatedly detecting the surface with the optical and mechanical surface detector and comparing the results. The output gives the detecting heights of both systems, the difference between the two systems and the standard deviation of the detection repeatability. Air bubbles or refraction in the liquid due to separation of the sugar-water mixture gives poor repeatability (above ± 0.1mm). To prevent wrong results tests are only executed when the liquid is free of air bubbles.The difference between the optical surface detection and the actual surface depends on the probe and is specified with each probe. (It does not depend on the surface reflectivity or the probe angle to the surface within ± 30°.)

· Area Scan

The Area Scan is used as a fast scan in two dimensions to find the area of high field values before running a detailed measurement around the hot spot.Before starting the area scan a grid spacing of 15 mm x 15 mm is set. During the scan the distance of the probe to the phantom remains unchanged.

After finishing area scan, the field maxima within a range of 2 dB will be ascertained.

· Zoom Scan

Zoom Scans are used to estimate the peak spatial SAR values within a cubic averaging volume containing 1 g and 10 g of simulated tissue. The default Zoom Scan is done by 7x7x7 points within a cube whose base is centered around the maxima found in the preceding area scan.

· Spatial Peak Detection

The procedure for spatial peak SAR evaluation has been implemented and can determine values of masses of 1g and 10g, as well as for user-specific masses. The DASY5 system allows evaluations that combine measured data and robot positions, such as:

• maximum search
• extrapolation
• boundary correction
• peak search for averaged SAR

During a maximum search, global and local maxima searches are automatically performed in 2-D after each Area Scan measurement with at least 6 measurement points. It is based on the evaluation of the local SAR gradient calculated by the Quadratic Shepard·s method. The algorithm will find the global maximum and all local maxima within -2 dB of the global maxima for all SAR distributions.

Extrapolation routines are used to obtain SAR values between the lowest measurement points and the inner phantom surface. The extrapolation distance is determined by the surface detection distance and the probe sensor offset. Several measurements at different distances are necessary for the extrapolation. Extrapolation routines require at least 10 measurement points in 3-D space.

They are used in the Zoom Scan to obtain SAR values between the lowest measurement points and the inner phantom surface. The routine uses the modified Quadratic Shepard·s method for extrapolation. For a grid using 7x7x7 measurement points with 5mm resolution amounting to 343 measurement points, the uncertainty of the extrapolation routines is less than 1% for 1g and 10g cubes.

· A Z-axis scan measures the total SAR value at the x-and y-position of the maximum SAR value found during the cube 7x7x7 scan. The probe is moved away in z-direction from the bottom of the SAM phantom in 5mm steps.

6.5. Data Storage and Evaluation

6.5.1. Data Storage

The DASY5 software stores the acquired data from the data acquisition electronics as raw data (in microvolt readings from the probe sensors), together with all necessary software parameters for the data evaluation (probe calibration data, liquid parameters and device frequency and modulation data) in measurement files with the extension ".DA4". The software evaluates the desired unit and format for output each time the data is visualized or exported. This allows verification of the complete software setup even after the measurement and allows correction of incorrect parameter settings. For example, if a measurement has been performed with a wrong crest factor parameter in the device setup, the parameter can be corrected afterwards and the data can be re-evaluated. The measured data can be visualized or exported in different units or formats, depending on the selected probe type ([V/m], [A/m], [°C], [mW/g], [mW/cm²], [dBrel], etc.). Some of these units are not available in certain situations or show meaningless results, e.g., a SAR output in a lossless media will always be zero. Raw data can also be exported to perform the evaluation with other software packages.

6.5.2. Data Evaluation by SEMCAD

The SEMCAD software automatically executes the following procedures to calculate the field units from the microvolt readings at the probe connector. The parameters used in the evaluation are stored   in the configuration modules of the software:

Probe parameters: - Sensitivity $Norm_i$, a_{i0}, a_{i1}, a_{i2}

                        - Conversion factor $ConvF_i$

                        - Diode compression point Dcp_i

Device parameters: - Frequency f

                        - Crest factor cf

Media parameters: - Conductivity

                        - Density

These parameters must be set correctly in the software. They can be found in the component documents or they can be imported into the software from the configuration files issued for the DASY5 components. In the direct measuring mode of the multimeter option, the parameters of the actual system setup are used. In the scan visualization and export modes, the parameters stored in the corresponding document files are used.

The first step of the evaluation is a linearization of the filtered input signal to account for the compression characteristics of the detector diode. The compensation depends on the input signal, the diode type and the DC-transmission factor from the diode to the evaluation electronics.

If the exciting field is pulsed, the crest factor of the signal must be known to correctly compensate for peak power. The formula for each channel can be given as:

$$V_i = U_i + U_i{}^2 \cdot c\,f\,/\,d\,c\,p_i$$

With V_i = compensated signal of channel i   (i = x, y, z)

     U_i = input signal of channel i   (i = x, y, z)

     cf = crest factor of exciting field   (DASY parameter)

     dcp_i = diode compression point   (DASY parameter)

From the compensated input signals the primary field data for each channel can be evaluated:

E-field probes: $E_i = (\,V_i\,/\,Norm_i \cdot ConvF\,)_{1/2}$

H-field probes: $H_i = (\,V_i\,)^{1/2} \cdot (\,a_{i0} + a_{i1}\,f + a_{i2}f_2\,)\,/\,f$

With V_i = compensated signal of channel i   (i = x, y, z)

     $Norm_i$ = sensor sensitivity of channel i   (i = x, y, z)

        [mV/(V/m)^2] for E-field Probes

$ConvF$ = sensitivity enhancement in solution

a_{ij} = sensor sensitivity factors for H-field probes

f = carrier frequency [GHz]

E_i = electric field strength of channel i in V/m

H_i = magnetic field strength of channel i in A/m

The RSS value of the field components gives the total field strength (Hermitian magnitude):

$$E_{tot} = (E_x{}^2 + E_Y{}^2 + E_z{}^2)^{1/2}$$

The primary field data are used to calculate the derived field units.

$$SAR = (\,E_{tot}{}^2 \cdot \,)\,/\,(\cdot\,1000)$$

with SAR = local specific absorption rate in mW/g

E_{tot} = total field strength in V/m

   = conductivity in [mho/m] or [Siemens/m]

= equivalent tissue density in g/cm3

Note that the density is normally set to 1 (or 1.06), to account for actual brain density rather than the
density of the simulation liquid. The power flow density is calculated assuming the excitation field to
be a free space field.

$$P_{pwe} = E_{tot}{}^2 / 3770 \qquad \text{or} \quad P_{pwe} = H_{tot}{}^2 \cdot 37.7$$

with P_{pwe} = equivalent power density of a plane wave in mW/cm²

E_{tot} = total electric field strength in V/m

H_{tot} = total magnetic field strength in A/m

6.6. System check

The manufacturer calibrates the probes annually. Dielectric parameters of the tissue simulates were measured every day using the dielectric probe kit and the network analyzer. A system check measurement was made following the determination of the dielectric parameters of the simulates, using the dipole validation kit. A power level of 250 mW was supplied to the dipole antenna, which was placed under the flat section of the twin SAM phantom. The system check results (dielectric parameters and SAR values) are given in the 8.1 and 8.2.
System check results have to be equal or near the values determined during dipole calibration with the relevant liquids and test system (±10 %).
System check is performed regularly on all frequency bands where tests are performed with the DASY 5 system.
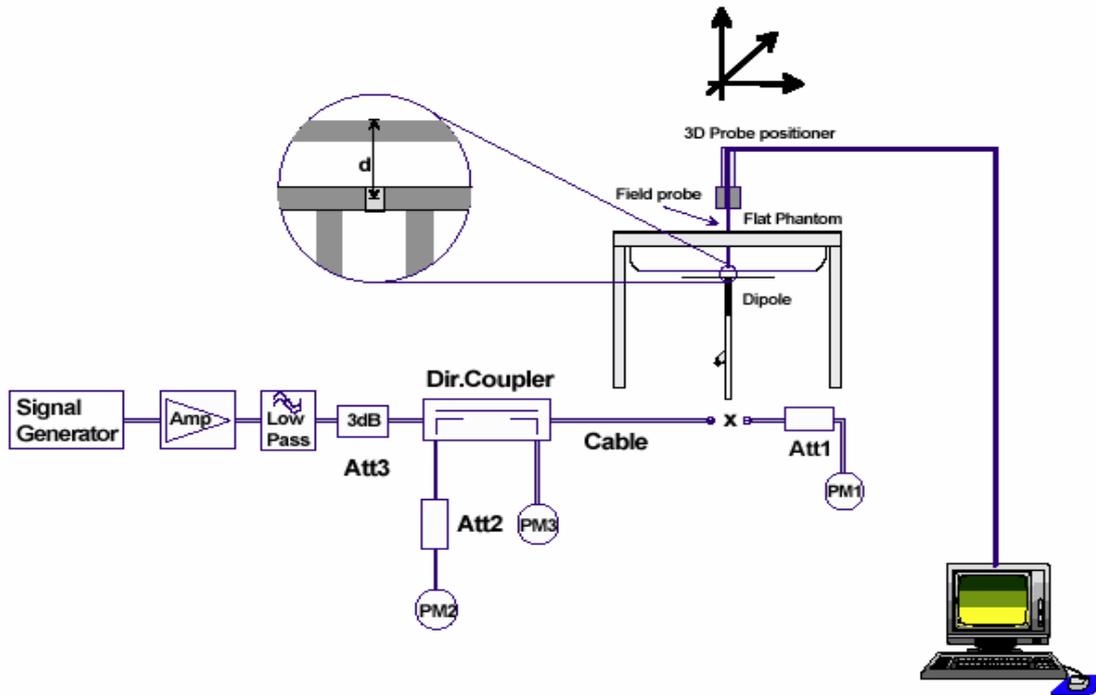
Figure 6. **System Check Set-up**

6.7. Equivalent Tissues

The liquid is consisted of water, salt, Glycol, Sugar, Preventol and Cellulose.The liquid has previously been proven to be suited for worst-case. The Table 1 and Table 2 show the detail solution. It's satisfying the latest tissue dielectric parameters requirements proposed by the OET 65.

MIXTURE%	FREQUENCY(head) 835MHz
Water	41.45
Sugar	56
Salt	1.45
Preventol	0.1
Cellulose	1.0
Dielectric Parameters Target Value	f=835MHz ε=41.5 σ=0.9

MIXTURE%	FREQUENCY(head)1900MHz
Water	55.242
Glycol monobutyl	44.452
Salt	0.306
Dielectric Parameters Target Value	f=1950MHz ε=40.0 σ=1.40

MIXTURE%	FREQUENCY(head)2450MHz
Water	56
Glycol monobutyl	44
Salt	0.00
Dielectric Parameters Target Value	f=2450MHz ε=39.2 σ=1.8

MIXTURE%	FREQUENCY(body) 835MHz
Water	52.5
Sugar	45
Salt	1.4
Preventol	0.1
Cellulose	1.0
Dielectric Parameters Target Value	f=835MHz ε=55.2 σ=0.97

MIXTURE%	FREQUENCY(body)1900MHz
Water	69.91
Glycol monobutyl	29.96
Salt	0.13
Dielectric Parameters Target Value	f=1950MHz ε=53.3 σ=1.52

MIXTURE%	FREQUENCY(body)2450MHz
Water	70
Glycol monobutyl	30
Salt	0
Dielectric Parameters Target Value	f=2450MHz ε=52.7 σ=1.95

7. Conducted Output Power Measurement

7.1. Summary

The DUT is tested using an CMU200 communications tester as controller unit to set test channels
and maximum output power to the DUT, as well as for measuring the conducted power.
Conducted output power was measured using an integrated RF connector and attached RF cable.
This result contains conducted output power for the EUT.

7.2. Conducted Power Results

GSM850	Conducted power		
	Channel 128	Channel 189	Channel 251
Results（dBm）	32.5	32.6	32.7
PCS1900	Conducted power		
	Channel 512	Channel 661	Channel 810
Results（dBm）	29.1	29.0	29.0

GSM850+GPRS (GMSK)	CONDUCTED POWER						
	Ch 128	Ch 189	Ch 251	(dB)	Ch 128	Ch 189	Ch 251
1 TX-slot result	32.53	32.56	32.67	-9.03	23.50	23.53	23.64
2 TX-slot result	31.48	31.51	31.62	-6.02	25.46	25.49	25.60
3 TX-slot result	30.25	30.28	30.39	-4.26	25.99	26.02	26.13
4 TX-slot result	29.44	29.47	29.58	-3.01	**26.43**	**26.46**	**26.57**
GSM850+ EDGE (GMSK)	CONDUCTED POWER						
	Ch 512	Ch 661	Ch 810	(dB)	Ch 512	Ch 661	Ch 810
1 TX-slot result	32.51	32.57	32.65	-9.03	23.48	23.54	23.62
2 TX-slot result	31.46	31.52	31.60	-6.02	25.44	25.50	25.58
3 TX-slot result	30.23	30.29	30.37	-4.26	25.97	26.03	26.11
4 TX-slot result	29.42	29.48	29.56	-3.01	**26.41**	**26.47**	**26.55**

PCS1900+GPRS (GMSK)	CONDUCTED POWER						
	Ch 128	Ch 189	Ch 251	(dB)	Ch 128	Ch 189	Ch 251
1 TX-slot result	29.14	29.08	29.02	-9.03	20.11	20.05	19.99
2 TX-slot result	28.09	28.03	27.97	-6.02	22.07	22.01	21.95
3 TX-slot result	26.86	26.80	26.74	-4.26	22.60	22.54	22.48
4 TX-slot result	26.05	25.99	25.93	-3.01	**23.04**	**22.98**	**22.92**
PCS1900+EDGE (GMSK)	CONDUCTED POWER						
	Ch 512	Ch 661	Ch 810	(dB)	Ch 512	Ch 661	Ch 810
1 TX-slot result	29.12	29.07	28.99	-9.03	20.09	20.04	19.96
2 TX-slot result	28.07	28.02	27.94	-6.02	22.05	22.00	21.92
3 TX-slot result	26.84	26.79	26.71	-4.26	22.58	22.53	22.45
4 TX-slot result	26.03	25.98	25.90	-3.01	**23.02**	**22.97**	**22.89**

Note:

To average the power, the division factor is as follows:

1 TX-slot =1 transmit time slot of 8 time slots
=>conducted power divided by (8/1) =>-9.03dB
2 TX-slot =2 transmit time slot of 8 time slots
=>conducted power divided by (8/2) =>-6.02dB
3 TX-slot =3 transmit time slot of 8 time slots
=>conducted power divided by (8/3) =>-4.26dB
4 TX-slot =4 transmit time slot of 8 time slots
=>conducted power divided by (8/4) =>-3.01dB

WCDMA BAND II	Conducted Power		
	Channel9262	Channel9400	Channel9538
12.2kbps RMC（dBm）	22.62	22.45	22.86
WCDMA BAND II +HSDPA（dBm）	Conducted Power		
	Channel9262	Channel9400	Channel9538
SUB-TEST 1	20.32	20.31	20.14
SUB-TEST 2	19.78	19.67	19.89
SUB-TEST 3	19.69	19.77	19.87
SUB-TEST 4	20.23	20.34	20.1

WCDMA BAND II +HSUPA（dBm）	Conducted power		
	Channel9262	Channel9400	Channel9538
SUB-TEST 1	21.14	21.39	21.19
SUB-TEST 2	18.98	18.99	18.82
SUB-TEST 3	19.78	19.80	19.94
SUB-TEST 4	18.74	18.85	19.08
SUB-TEST 5	20.75	20.84	20.93
WCDMA BAND V	Conducted Power		
	Channel4132	Channel4183	Channel4233
12.2kbps RMC（dBm）	22.49	22.44	22.37
WCDMA BAND V +HSDPA（dBm）	Conducted Power		
	Channel4132	Channel4183	Channel4233
SUB-TEST 1	21.72	21.71	21.04
SUB-TEST 2	21.18	21.07	20.79
SUB-TEST 3	21.09	21.17	20.77
SUB-TEST 4	21.63	21.74	21.01
WCDMA BAND V +HSUPA（dBm）	Conducted Power		
	Channel4132	Channel4183	Channel4233
SUB-TEST 1	21.84	21.79	22.09
SUB-TEST 2	20.38	20.39	20.12
SUB-TEST 3	21.18	21.20	20.84
SUB-TEST 4	20.64	20.55	20.28
SUB-TEST 5	21.75	21.74	21.83

Wi-Fi Average Output Power

802.11b（dBm）

Channel\data rate	1Mbps	2Mbps	5.5Mbps	11Mbps
1	17.55	17.21	17.29	17.38
6	18.72	17.78	17.95	17.72
11	17.86	17.47	17.72	17.53

802.11g（dBm）

Channel\data rate	6Mbps	9Mbps	12Mbps	18Mbps	24Mbps	36Mbps	48Mbps	54Mbps
1	15.79	15.81	15.88	15.85	17.07	16.96	16.85	16.78
6	15.58	15.56	15.59	15.58	17.25	17.06	16.57	16.64
11	15.38	15.43	15.48	15.37	16.95	16.78	16.66	16.41

20M　802.11n（dBm）

Channel\data rate	MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7
1	15.37	14.96	14.07	14.91	13.51	13.38	13.47	12.38
6	15.12	15.08	14.12	15.02	13.58	13.46	13.45	12.44
11	14.66	14.55	13.68	14.51	13.57	13.38	13.34	12.43

8 Test Results

8.1. Dielectric Performance

Dielectric Performance of Head Tissue Simulating Liquid

Frequency	Description	Dielectric Parameters εr	σ(s/m)	temp ℃
835MHz (head)	Target value 5% window	41.5 39.42-43.57	0.9 0.85— 0.945	/
	Measurement value 2012-04-19	41.7	0.88	21.6
835MHz (body)	Target value 5% window	55.2 52.44-57.96	0.97 0.92-1.02	/
	Measurement value 2012-04-21	54.1	0.96	21.7
	Measurement value 2012-04-23	54.3	0.96	22.1
	Measurement value 2012-05-16	54.2	0.95	21.8
	Measurement value 2012-05-17	54.2	0.96	21.7
1900MHz (head)	Target value 5% window	40.0 38-42	1.40 1.33 — 1.47	/
	Measurement value 2012-04-19	39.1	1.36	21.6
1900MHz (body)	Target value 5% window	53.3 50.63-55.96	1.52 1.44 — 1.60	/
	Measurement value 2012-04-22	52.4	1.49	21.7
	Measurement value 2012-05-17	52.6	1.48	21.7
2450MHz (head)	Target value 5% window	39.2 37.24-41.16	1.8 1.71-1.89	/
	Measurement value 2012-04-24	37.86	1.785	21.7
2450MHz (body)	Target value 5% window	52.7 50.06-55.33	1.95 1.85 — 2.05	/
	Measurement value 2012-04-24	51.9	1.93	21.6

8.2. System Check Results

System Check for Head tissue simulation liquid

Frequency	Description	SAR(W/kg)		Dielectric Parameters εr	σ(s/m)	Temp ℃
		10g	1g			
835MHz (head)	Recommended result ±10% window	1.53 1.38-1.68	2.37 2.13-2.61	41.5	0.9	/
	Measurement value 2012-04-19	1.65	2.54	41.7	0.88	21.6
835MHz (body)	Recommended result ±10% window	1.59 1.43-1.75	2.45 2.21-2.70	55.2	0.97	/
	Measurement value 2012-04-21	1.54	2.36	54.1	0.967	21.7
	Measurement value 2012-04-23	1.55	2.4	54.3	0.96	22.1
	Measurement value 2012-05-16	1.58	2.43	54.2	0.95	21.8
	Measurement value 2012-05-17	1.51	2.32	54.2	0.96	21.7
1900MHz (head)	Recommended result ±10% window	5.21 4.69-5.73	9.99 9.00-10.98	40.0	1.40	/
	Measurement value 2012-04-19	4.81	9.42	39.1	1.36	21.6
1900MHz (body)	Recommended result ±10% window	5.36 4.83-5.89	10.2 9.18-11.22	53.3	1.52	/
	Measurement value 2012-04-22	5.12	10.3	52.4	1.49	21.7
	Measurement value 2012-05-17	5.01	9.77	52.6	1.48	21.7
2450MHz (head)	Recommended result ±10% window	6.05 5.45-6.66	13.3 11.97-14.63	39.2	1.8	/
	Measurement value 2012-04-24	5.93	13.2	37.86	1.785	21.7
2450MHz (body)	Recommended result ±10% window	6.14 5.53-6.75	13.1 11.79-14.41	52.7	1.95	/
	Measurement value 2012-04-24	6.28	13.8	51.9	1.93	21.6

Note: 1. the graph results see ANNEX D.

2 .Recommended Values used derive from the calibration certificate and 250 mW is used as feeding power to the calibrated dipole.

8.3. Test Results

8.3.1. Summary of Measurement Results (GSM850)

SAR Values (GSM850)

Test Case		Measurement Result(W/kg)	Power Drift(dB)	Note
Different Test Position	Channel	1 g		
		Average		
Test position of Head				
Left head, Touch cheek	middle	0.969	-0.15	
Left head, Tilt 15 Degree	middle	0.514	-0.09	
Right head, Touch cheek	middle	**0.951**	-0.04	**Max**
Right head, Tilt 15 Degree	middle	0.497	0.03	
Left head, Touch cheek	low	0.673	0.09	
	high	0.858	-0.14	
Right head, Touch cheek	low	0.686	0.03	
	high	0.846	0.10	
Test position of Body (Distance 10mm)				
Towards phantom	middle	0.959	-0.05	
Towards Ground	middle	0.973	0.04	
Towards phantom	low	0.845	-0.01	
	high	0.880	-0.13	
Towards Ground	low	1.07	-0.10	
	high	0.983	-0.11	
Towards Ground	low	0.908	0.10	Earphone
Worst case position of Body with GPRS(4UP) (Distance 10mm)				
Towards phantom	middle	0.924	-0.12	
Towards Ground	middle	0.959	0.04	

Front	middle	0.189	0.17	
left side	middle	0.657	0.10	
right side	middle	0.501	0.05	
Towards phantom	low	0.994	-0.07	
	high	0.959	-0.04	
Towards Ground	low	**1.16**	0.18	**Max**
	high	1.02	-0.07	
Towards Ground	low	1.14	-0.10	EDGE(4UP)

Note: 1.The value with blue color is the maximum SAR Value of test case of head and body in each test band.

2. Upper and lower frequencies were measured at the worst position.

3. The SAR test shall be performed at the high, middle and low frequency channels of each operating mode. If the SAR measured at mid-band channel for each test configuration is at least 3.0 dB lower than the SAR limit (< 0.8W/kg), testing at the high and low channels is optional.

8.3.2. Summary of Measurement Results (GSM1900)

SAR Values (GSM1900)

Test Case		Measurement Result(W/kg)	Power Drift(dB)	Note
Different Test Position	Channel	1 g		
		Average		
Test position of Head				
Left head, Touch cheek	middle	0.791	-0.13	
Left head, Tilt 15 Degree	middle	0.220	-0.02	
Right head, Touch cheek	middle	0.395	0.15	
Right head, Tilt 15 Degree	middle	0.219	-0.07	
Left head, Touch cheek	low	0.662	-0.13	
	high	**1.05**	-0.06	**Max**

Test position of Body (Distance 10mm)				
Towards phantom	middle	0.650	-0.03	
Towards Ground	middle	0.885	-0.10	
Towards Ground	low	0.772	0.11	
	high	0.895	-0.02	
Towards Ground	high	**0.898**	0.01	Earphone **Max**
Worst case position of Body with GPRS(4UP) (Distance 10mm)				
Towards phantom	middle	0.549	-0.12	
Towards Ground	middle	0.691	0.0057	
Front	middle	0.331	0.06	
left side	middle	0.218	-0.05	
right side	middle	0.141	0.11	
Towards Ground	low	0.665	-0.14	
	high	0.686	0.09	
Towards Ground	high	0.672	-0.07	EDGE(4UP)

Note: 1.The value with blue color is the maximum SAR Value of test case of head and
body in each test band.
2. Upper and lower frequencies were measured at the worst position.
3. The SAR test shall be performed at the high, middle and low frequency channels
of each operating mode. If the SAR measured at mid-band channel for each test
configuration is at least 3.0 dB lower than the SAR limit (< 0.8 W/kg), testing at the
high and low channels is optional.

8.3.3. Summary of Measurement Results (WCDMA BAND II)

SAR Values (WCDMA BAND II)

Test Case		Measurement Result(W/kg)	Power Drift(dB)	Note
Different Test Position	Channel	1 g		
		Average		
Test position of Head				

Left head, Touch cheek	middle	1.15	-0.01	
Left head, Tilt 15 Degree	middle	0.317	-0.0012	
Right head, Touch cheek	middle	0.583	0.02	
Right head, Tilt 15 Degree	middle	0.315	-0.05	
Left head, Touch cheek	low	**1.17**	0.02	**Max**
	high	0.877	-0.08	
Test position of Body (Distance 10mm)				
Towards phantom	middle	0.518	0.06	
Towards Ground	middle	**1.14**	0.12	**Max**
Front	middle	0.456	-0.06	
left side	middle	0.325	0.01	
right side	middle	0.165	0.11	
Towards Ground	low	1.13	-0.09	
	high	1.06	0.03	
Worst case position of Body with (Distance 10mm)				
Towards Ground	middle	0.725	0.05	Earphone
Towards Ground	middle	0.722	0.02	HSDPA

Note: 1.The value with blue color is the maximum SAR Value of test case of head and body in each test band.

2. Upper and lower frequencies were measured at the worst position.

3. The SAR test shall be performed at the high, middle and low frequency channels of each operating mode. If the SAR measured at mid-band channel for each test configuration is at least 3.0 dB lower than the SAR limit (< 0.8 W/kg), testing at the high and low channels is optional.

8.3.4. Summary of Measurement Results (WCDMA BAND V)

SAR Values (WCDMA BAND V)

Test Case	Measurement Result(W/kg)	Power Drift(dB)	Note

Different Test Position	Channel	1 g		
		Average		
Test position of Head				
Left head, Touch cheek	middle	0.465	0.07	
Left head, Tilt 15 Degree	middle	0.247	0.03	
Right head, Touch cheek	middle	0.476	0.03	
Right head, Tilt 15 Degree	middle	0.266	0.07	
Right head, Touch cheek	low	0.486	0.02	
	high	**0.659**	0.11	**Max**
Test position of Body (Distance 10mm)				
Towards phantom	middle	0.711	-0.17	
Towards Ground	middle	**0.973**	-0.07	**Max**
Front	middle	0.111	0.12	
left side	middle	0.604	-0.14	
right side	middle	0.520	0.05	
Towards Ground	low	0.910	0.0026	
	high	0.855	0.03	
Worst case position of Body with (Distance 10mm)				
Towards Ground	middle	0.834	-0.14	Earphone
Towards Ground	middle	0.821	-0.07	HSDPA

Note: 1.The value with blue color is the maximum SAR Value of test case of head and body in each test band.

2. Upper and lower frequencies were measured at the worst position.

3. The SAR test shall be performed at the high, middle and low frequency channels of each operating mode. If the SAR measured at mid-band channel for each test configuration is at least 3.0 dB lower than the SAR limit (< 0.8 W/kg), testing at the high and low channels is optional.

8.3.5. Summary of Measurement Results (Wi-Fi)

SAR Values (802.11b/g/n)

Test Case		Measurement Result(W/kg)	Power Drift(dB)	Note
Different Test Position	Channel	1 g		
		Average		
Test position of Head				
Left head, Touch cheek	middle	0.273	-0.44	
Left head, Tilt 15 Degree	middle	0.213	0.26	
Right head, Touch cheek	middle	0.204	-0.45	
Right head, Tilt 15 Degree	middle	0.207	0.43	
Left head, Touch cheek	low	0.309	0.0083	
	high	**0.329**	0.13	**Max**
Left head, Touch cheek	high	0.322	0.03	802.11g
Left head, Touch cheek	high	0.315	-0.0066	802.11n(20MHz)
Test position of Body (Distance 10mm)				
Towards phantom	middle	0.112	0.44	
Towards Ground	middle	0.116	-0.16	
back	middle	0.012	0.42	
Left side	middle	0.035	0.13	
right side	middle	0.093	0.30	
Towards Ground	low	0.131	0.92	
	high	**0.134**	0.08	**Max**
Worst case position of Body with (Distance 10mm)				
Towards Ground	high	0.062	0.23	802.11g
Towards Ground	high	0.069	0.32	802.11n(20MHz)

Note: 1.The value with blue color is the maximum SAR Value of test case of head and

2. Upper and lower frequencies were measured at the worst position.
3. The SAR test shall be performed at the high, middle and low frequency channels of each operating mode. If the SAR measured at mid-band channel for each test configuration is at least 3.0 dB lower than the SAR limit (< 0.8 W/kg), testing at the high and low channels is optional.

8.4. Conclusion

Maximum SAR

TEST BAND	Worst Position		CHANNAL	Maximum SAR(1g) (W/kg)	Limit of SAR(1g)
GSM850	Head	Right head, Touch cheek	middle	**0.951**	1.6
	Body	Towards Ground with GPRS(4UP)	low	**1.16**	1.6
GSM1900	Head	Left head, Touch cheek	high	**1.05**	1.6
	Body	Towards Ground with Earphone	high	**0.898**	1.6
WCDMA BAND II	Head	Left head, Touch cheek	low	**1.17**	1.6
	Body	Towards Ground	middle	**1.14**	1.6
WCDMA BAND V	Head	Right head, Touch cheek	high	**0.659**	1.6
	Body	Towards Ground	middle	**0.973**	1.6
Wi-Fi	Head	Left head, Touch cheek	high	**0.329**	1.6
	Body	Towards Ground	high	**0.134**	1.6

Evaluation for Simultaneous SAR

TEST MODE	Wi-Fi		Main Mode SAR(1g) (W/kg)	Wi-Fi SAR(1g) (W/kg)	Summation SAR(1g) (W/kg)	SAR –to-peak-location Separation Ratio	Simultaneous Measurement Required?
GSM850	802.11b	Head	0.951	0.329	＜1.6	/	No
		Body	1.16	0.134	＜1.6	/	No
GSM1900	802.11b	Head	1.05	0.329	＜1.6	/	No
		Body	0.898	0.134	＜1.6	/	No
WCDMA BAND II	802.11b	Head	1.17	0.329	＜1.6	/	No
		Body	1.14	0.134	＜1.6	/	No
WCDMA BAND V	802.11b	Head	0.659	0.329	＜1.6	/	No
		Body	0.973	0.134	＜1.6	/	No

General Judgment： PASS

ANNEX A: EUT Photograph
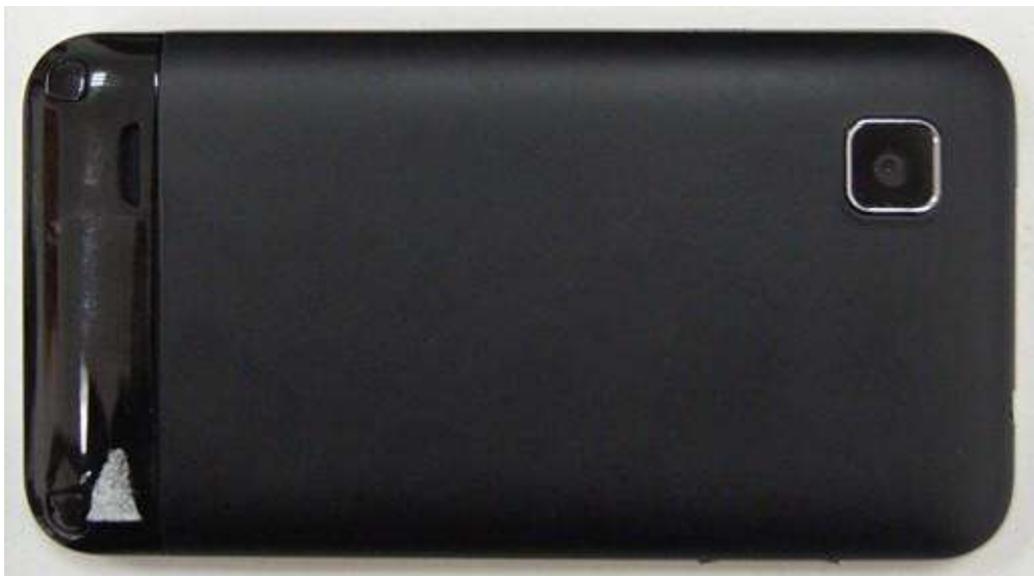
EUT

Battery

Travel Adaptor

Travel Adaptor

Earphone

POSITION OF LEFT HEAD TOUCH

POSITION OF LEFT HEAD TILT

POSITION OF RIGHT HEAD TOUCH
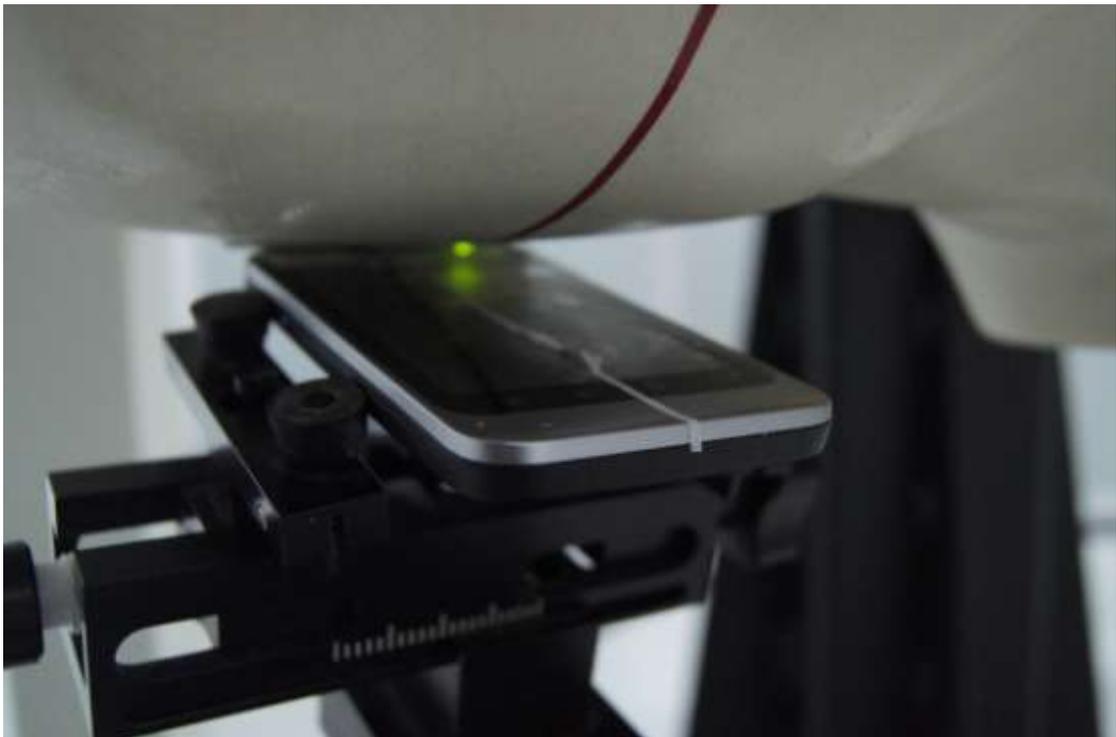
POSITION OF RIGHT HEAD TILT

POSITION OF BODY TOWARDS PHANTOM WITH 10mm DISTANCE
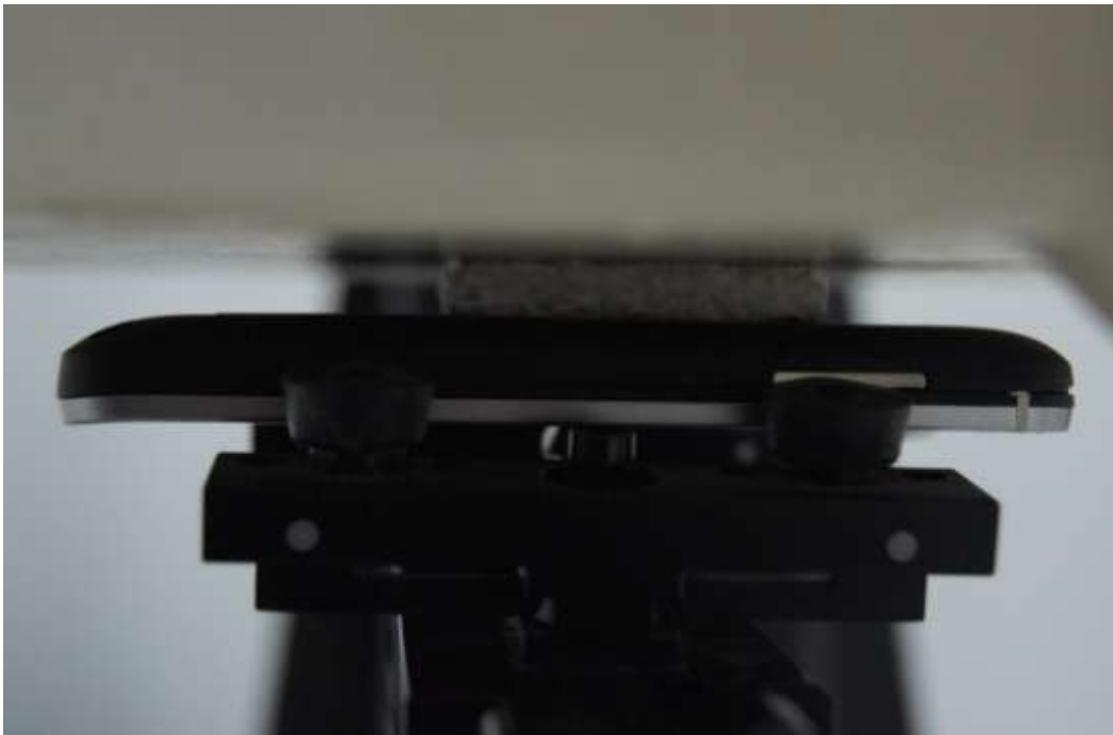
POSITION OF BODY TOWARDS GROUND WITH 10mm DISTANCE

POSITION OF BODY TOWARDS GROUND WITH 10mm DISTANCE (WITH EARPHONE)

POSITION OF BODY LEFT SIDE WITH 10mm DISTANCE
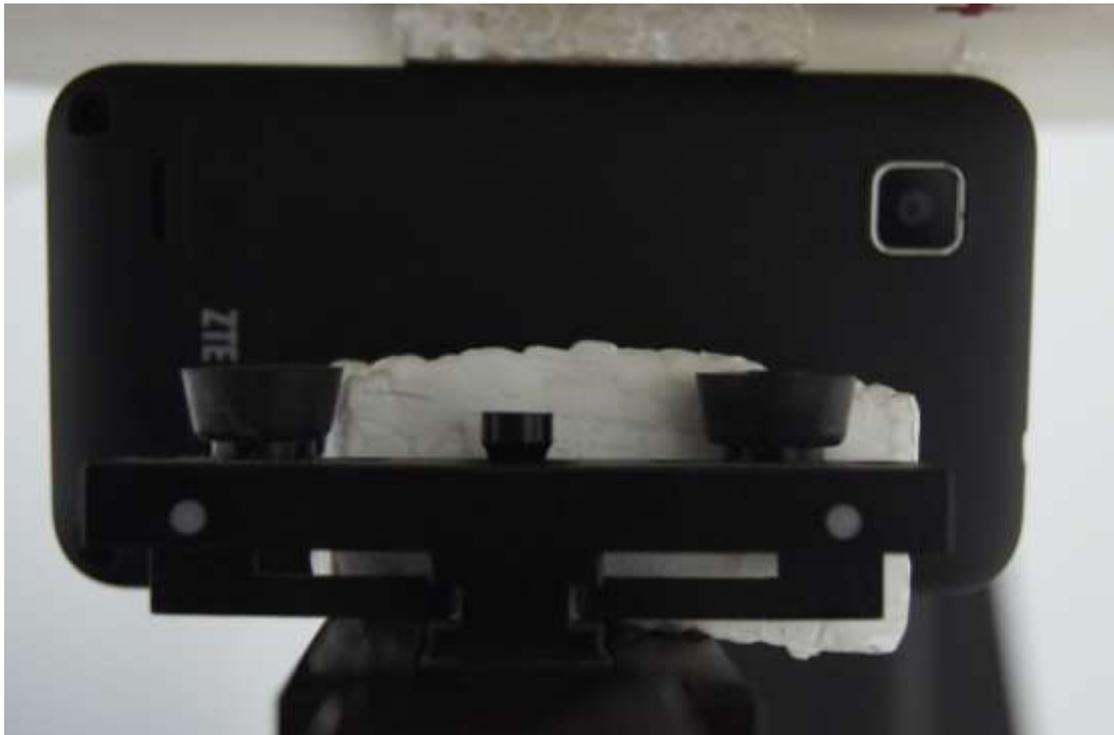
POSITION OF BODY RIGHT SIDE WITH 10mm DISTANCE
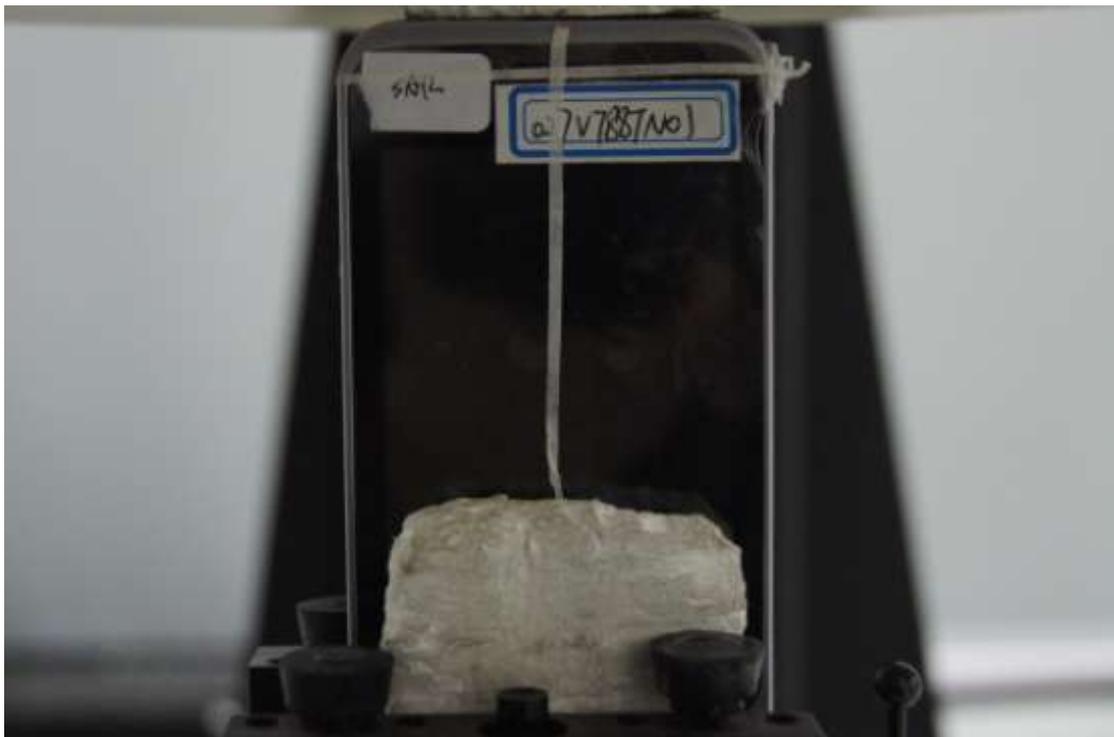
POSITION OF BODY BACK WITH 10mm DISTANCE

POSITION OF BODY FRONT WITH 10mm DISTANCE

ANNEX B: Measurement Uncertainty

No.	source	type	Uncertainty Value (%)	Probability Distribution	k	c_i	Standard uncertainty u_i' (%	Degree of freedom V_{eff} or v_i
1	-System repetivity	A	0.3	N	1	1	0.5	9
Measurement system								
2	—probe calibration	B	7	N	2	1	3.5	∞
3	—axial isotropy of the probe	B	4.7	R	$\sqrt{3}$	0.5	4.3	∞
4	— Hemispherical isotropy of the probe	B	9.4	R	$\sqrt{3}$	1	0	∞
5	—probe linearity	B	4.7	R	$\sqrt{3}$	1	2.7	∞
6	—System detection limits	B	1.0	R	$\sqrt{3}$	1	0.6	∞
7	—boundary effect	B	11.0	R	$\sqrt{3}$	1	6.4	∞
8	—response time	B	0	R	$\sqrt{3}$	1	0	∞
9	—noise	B	0	N	$\sqrt{3}$	1	0	∞
10	—integration time	B	5.0	R	$\sqrt{3}$	1	2.9	∞
11	–readout Electronics	B	0.4	R	$\sqrt{3}$	1	0.2	∞
12	—-phantom	B	2.9	R	$\sqrt{3}$	1	1.7	∞
13	—Probe Positioning with respect to Phantom Shell	B	2.9	R	$\sqrt{3}$	1	1.7	∞
14	—Device Holder Uncertainty	A	4.9	R	1	1	4.9	5
物理参数								
15	-liquid density	B	0	R	$\sqrt{3}$	1	0	∞
16	-liquid conductivity (deviation from target)	B	5.0	R	$\sqrt{3}$	0.5	2.9	∞
17	-liquid conductivity (measurement uncertainty)	A	0.23	N	1	1	0.23	9

18	-liquid permittivity (deviation from target)	B	5.0	R	$\sqrt{3}$	0.5	2.9	∞
19	-liquid permittivity (measurement uncertainty)	A	0.46	N	1	1	0.46	9
20	－Probe Positioner Mechanical Tolerance	B	5.0	R	$\sqrt{3}$	1	2.9	∞
21	－Environment	B	3.0	R	$\sqrt{3}$	1	1.7	∞
22	－Extrapolation, interpolation and Integration Algorithms for Max. SAR Evaluation	B	3.9	R	$\sqrt{3}$	1	2.3	∞
Combined standard uncertainty		$u_c^{'} = \sqrt{\sum_{i=1}^{22} c_i^2 u_i^2}$					12.2	88.7
Expanded uncertainty (confidence interval of95 %)		$u_e = 2u_c$	N	K=2			24.4	

ANNEX C: Main Test Instruments

No.	Name	Type	Calibration Date	Valid Period
01	Network analyzer	Agilent E5071E	Oct 14th，2011	One year
02	Dielectric Probe Kit	Agilent 85070E	No Calibration Requested	
03	Power meter	Agilent E4418B	Oct 14th，2011	One year
04	Power sensor	Agilent E9200B	Oct 14th，2011	One year
05	Signal Generator	Agilent N5182A	Oct 14th，2011	One year
06	Amplifier	ZHL-42W	No Calibration Requested	
07	BTS	CMU200	Oct 14th，2011	One year
08	E-field Probe	ES3DV3	Sep 27th，2011	One year
09	DAE	DAE4	June 13th，2011	One year
10	Validation Kit 835MHz	D835V2	June 14th，2011	One year
11	Validation Kit 1900MHz	D1900V2	July 22th ,2011	One year
12	Validation Kit 2450MHz	D2450V2	June 14th，2011	One year

ANNEX D: Test Layout

Picture 1: Specific Absorption Rate Test Layout
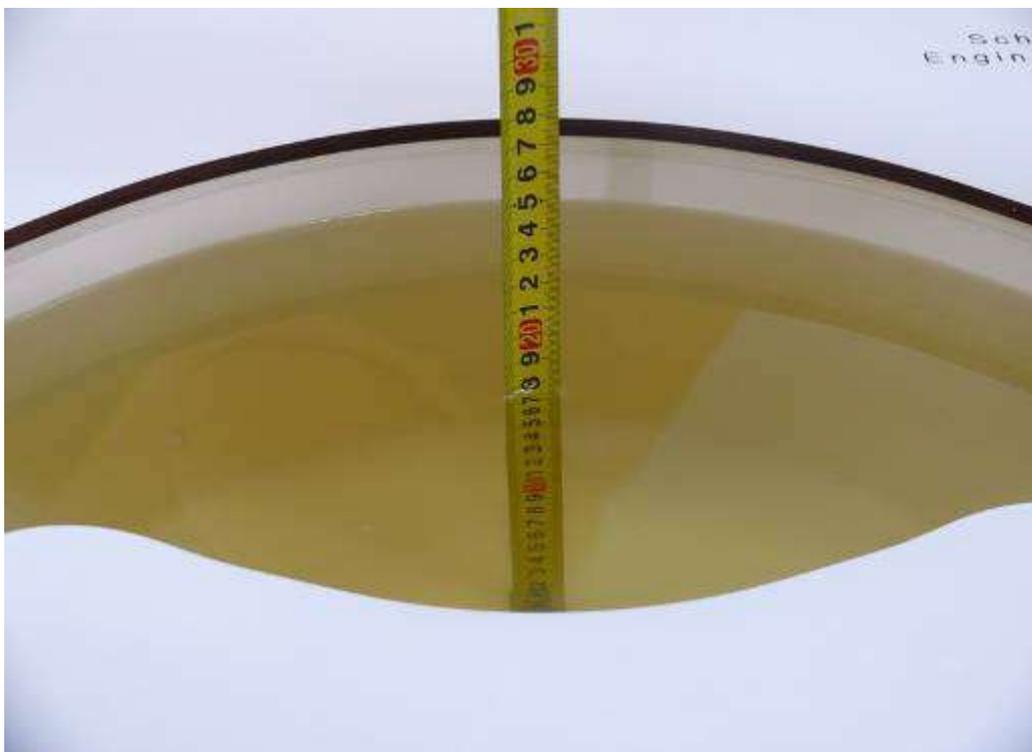
Picture 2: Liquid depth in the flat Phantom (835MHz)   (17.5cm deep)
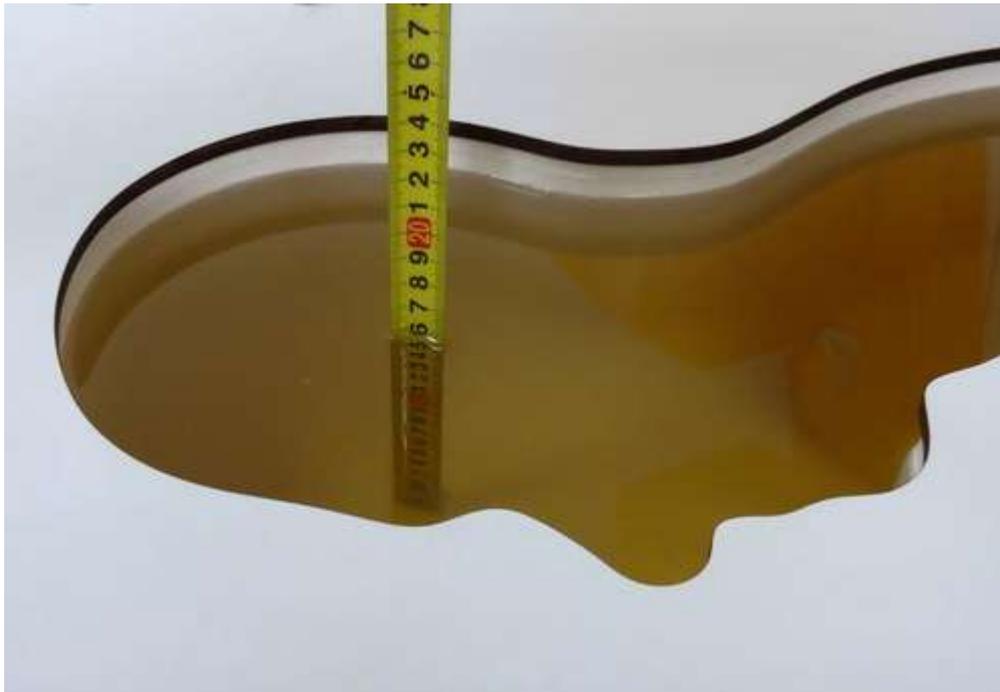
Picture 3: Liquid depth in the head Phantom (835MHz)   (16cm deep)

Picture 4: Liquid depth in the flat Phantom (1900 MHz)   (19cm deep)

Picture 5: liquid depth in the head Phantom (1900 MHz)   (15cm deep)
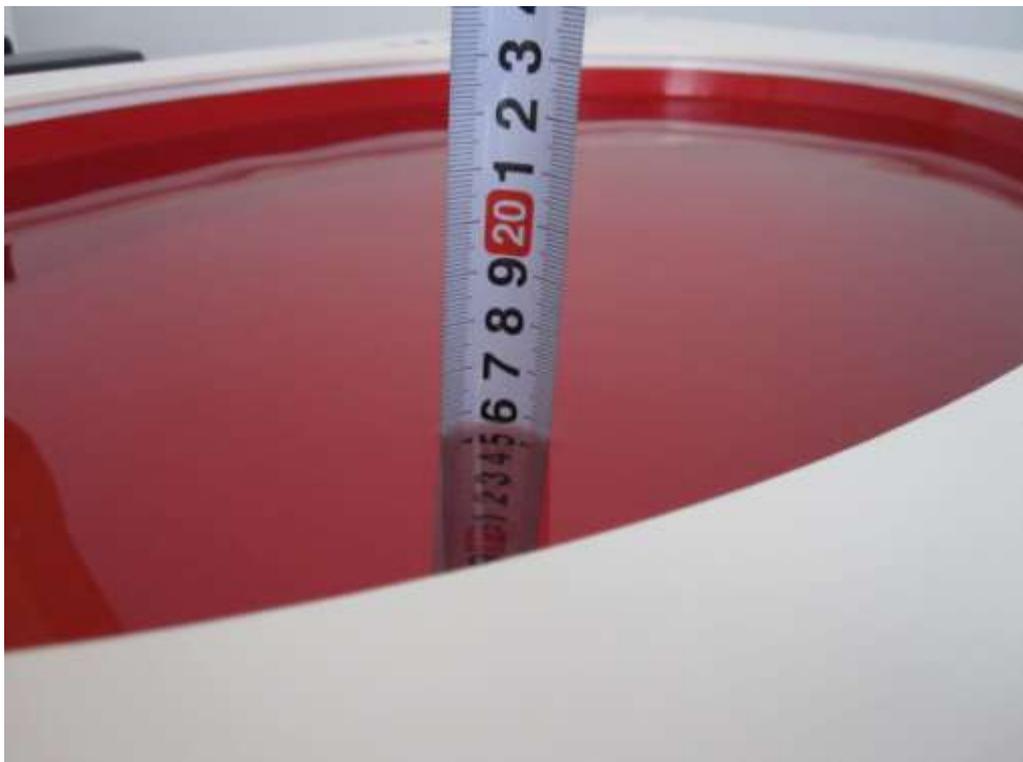
Picture 6: Liquid depth in the EL14 Phantom (2450 MHz)   (15.4cm deep)

ANNEX E: System Check Results

System check 835head
Date/Time: 2012/4/19 21:05:42
Communication System: CW; Communication System Band: D900 (900.0 MHz);
Frequency: 900 MHz; Communication System PAR: 0 dB
Medium parameters used (interpolated): f = 900 MHz; σ = 0.946 mho/m; ε_r = 40.484;
ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)
DASY5 Configuration:

- Probe: ES3DV3 - SN3241; ConvF(6.07, 6.07, 6.07);
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1226; Calibrated: 2011/6/13
- Phantom: SAM1; Type: SAM; Serial: TP1576
- Measurement SW: DASY52, Version 52.2 (0); SEMCAD X Version 14.6.4 (4989)

835head/d=15mm, Pin=250 mW, dist=3.0mm (ES-Probe)-BODY/Area Scan (61x121x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 3.051 mW/g

**835head/d=15mm, Pin=250 mW, dist=3.0mm (ES-Probe)-BODY/Zoom Scan (7x7x7) (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 52.560 V/m; Power Drift = 0.08 dB
Peak SAR (extrapolated) = 4.0320
SAR(1 g) = 2.54 mW/g; SAR(10 g) = 1.65 mW/g
Maximum value of SAR (measured) = 3.032 mW/g
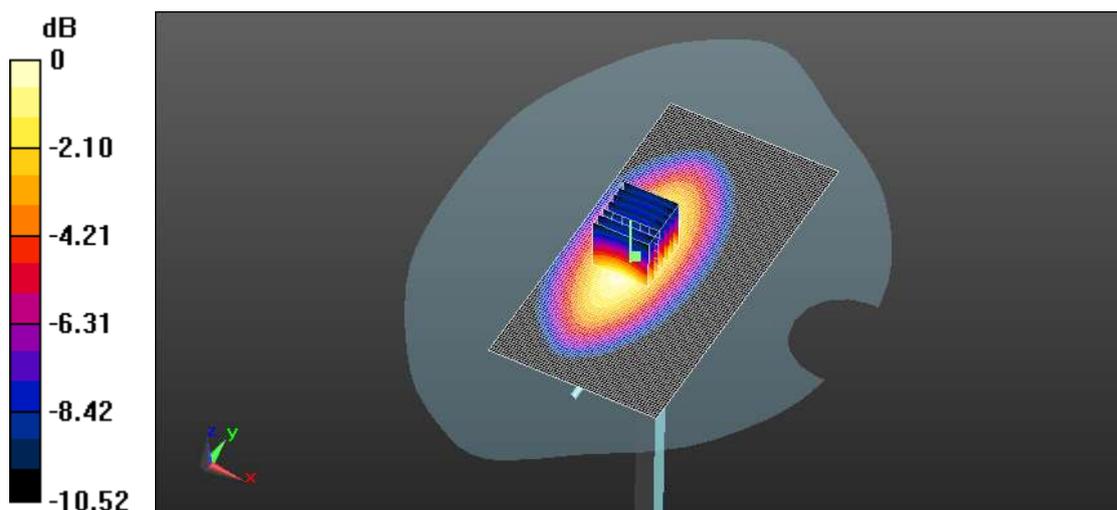
0 dB = 3.030mW/g = 9.63 dB mW/g

System check 835body

Date/Time: 2012/4/21 00:02:43

Communication System: CW; Communication System Band: D835 (835.0 MHz);

Frequency: 835 MHz; Communication System PAR: 0 dB

Medium parameters used: f = 835 MHz; σ = 0.948 mho/m; ε_r = 54.255; ρ = 1000 kg/m^3

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: ES3DV3 - SN3241; ConvF(6.19, 6.19, 6.19);
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1226; Calibrated: 2011/6/13
- Phantom: SAM1; Type: SAM; Serial: TP1576
- Measurement SW: DASY52, Version 52.2 (0); SEMCAD X Version 14.6.4 (4989)

835body/d=15mm, Pin=250 mW, dist=3.0mm (ES-Probe)-BODY/Area Scan (61x121x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 2.734 mW/g

**835body/d=15mm, Pin=250 mW, dist=3.0mm (ES-Probe)-BODY/Zoom Scan (7x7x7) (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 41.837 V/m; Power Drift = 0.01 dB

Peak SAR (extrapolated) = 3.6930

SAR(1 g) = 2.36 mW/g; SAR(10 g) = 1.54 mW/g

Maximum value of SAR (measured) = 2.783 mW/g
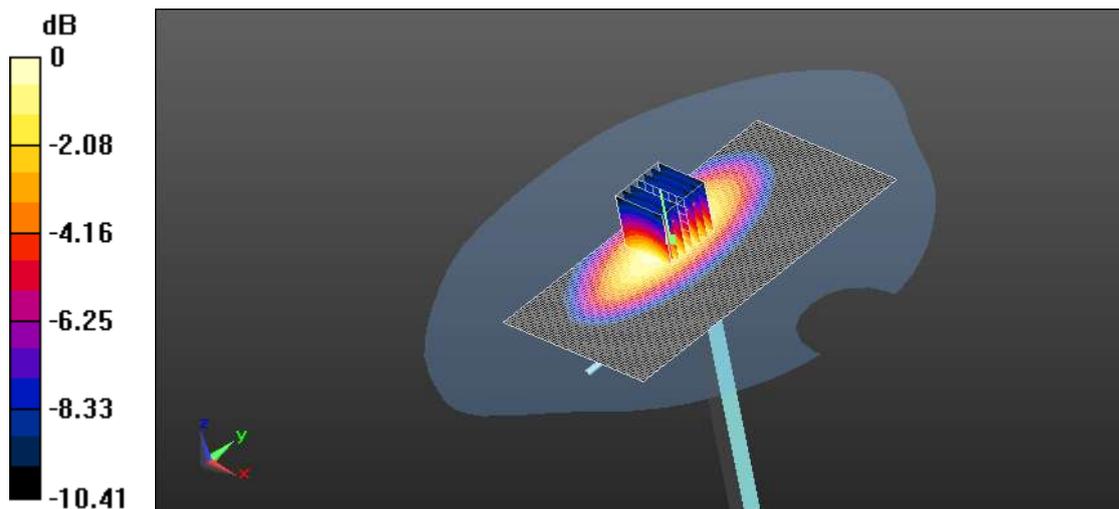
0 dB = 2.780mW/g = 8.88 dB mW/g

System check 835body

Date/Time: 2012/4/23 8:06:29

Communication System: CW; Communication System Band: D835 (835.0 MHz);

Frequency: 835 MHz; Communication System PAR: 0 dB

Medium parameters used: f = 835 MHz; σ = 0.948 mho/m; ε_r = 54.255; ρ = 1000 kg/m^3

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: ES3DV3 - SN3241; ConvF(6.19, 6.19, 6.19);
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1226; Calibrated: 2011/6/13
- Phantom: SAM1; Type: SAM; Serial: TP1576
- Measurement SW: DASY52, Version 52.2 (0); SEMCAD X Version 14.6.4 (4989)

835body/d=15mm, Pin=250 mW, dist=3.0mm (ES-Probe)-BODY/Area Scan (61x121x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 2.873 mW/g

**835body/d=15mm, Pin=250 mW, dist=3.0mm (ES-Probe)-BODY/Zoom Scan (7x7x7) (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 48.689 V/m; Power Drift = -0.00067 dB

Peak SAR (extrapolated) = 3.7340

SAR(1 g) = 2.4 mW/g; SAR(10 g) = 1.55 mW/g

Maximum value of SAR (measured) = 2.826 mW/g
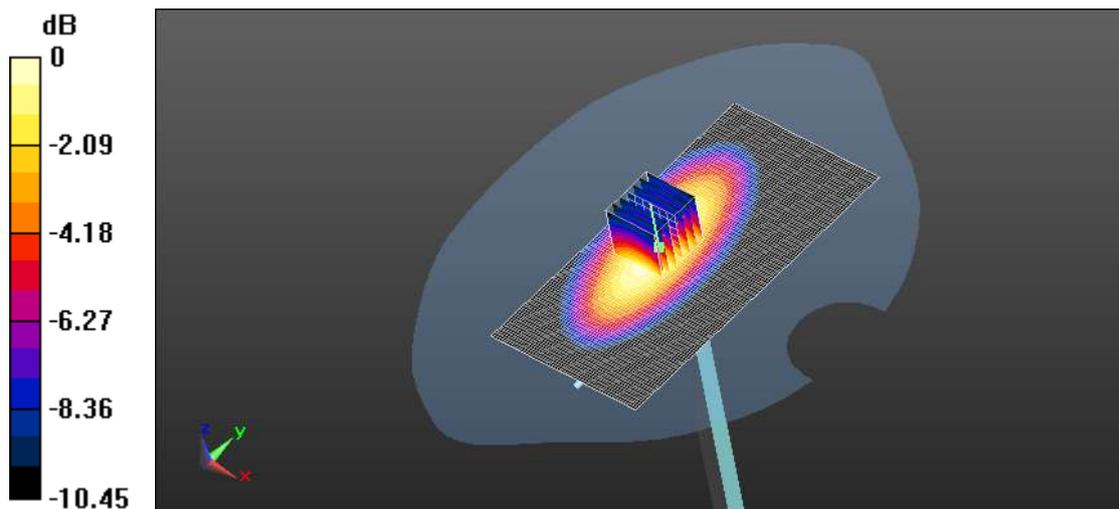
0 dB = 2.830mW/g = 9.04 dB mW/g

System check 835body

Date/Time: 2012-5-16 9:05:57

Communication System: CW; Communication System Band: D835 (835.0 MHz);

Frequency: 835 MHz; Communication System PAR: 0 dB

Medium parameters used: f = 835 MHz; σ = 0.948 mho/m; ε_r = 54.255; ρ = 1000 kg/m^3

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE-1528/OET65C)

DASY5 Configuration:

- Probe: ES3DV3 - SN3241; ConvF(6.19, 6.19, 6.19);
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1226; Calibrated: 2011-6-13
- Phantom: SAM1; Type: SAM; Serial: TP1576
- Measurement SW: DASY52, Version 52.2 (0); SEMCAD X Version 14.6.4 (4989)

835body/d=15mm, Pin=250 mW, dist=3.0mm (ES-Probe)-BODY/Area Scan (61x121x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 2.869 mW/g

**835body/d=15mm, Pin=250 mW, dist=3.0mm (ES-Probe)-BODY/Zoom Scan (7x7x7) (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 46.927 V/m; Power Drift = 0.07 dB

Peak SAR (extrapolated) = 3.7410

SAR(1 g) = 2.43 mW/g; SAR(10 g) = 1.58 mW/g

Maximum value of SAR (measured) = 2.860 mW/g
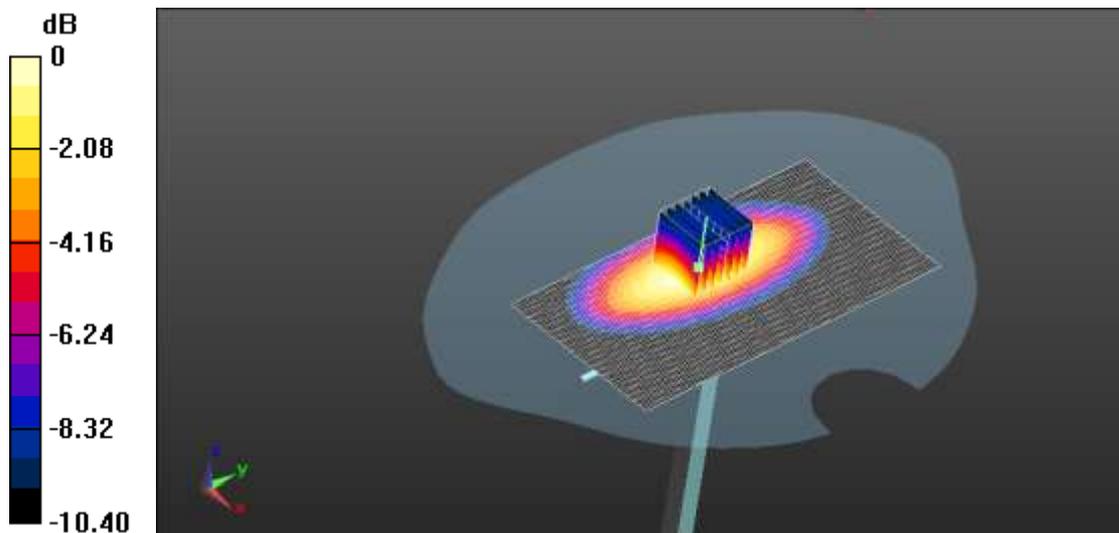
0 dB = 2.860mW/g = 9.13 dB mW/g

System check 835body

Date/Time: 2012-5-17 8:59:56

Communication System: CW; Communication System Band: D835 (835.0 MHz);

Frequency: 835 MHz; Communication System PAR: 0 dB

Medium parameters used: f = 835 MHz; σ = 0.948 mho/m; ε_r = 54.255; ρ = 1000 kg/m^3

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE-1528/OET65C)

DASY5 Configuration:

- Probe: ES3DV3 - SN3241; ConvF(6.19, 6.19, 6.19);
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1226; Calibrated: 2011-6-13
- Phantom: SAM1; Type: SAM; Serial: TP1576
- Measurement SW: DASY52, Version 52.2 (0); SEMCAD X Version 14.6.4 (4989)

835body/d=15mm, Pin=250 mW, dist=3.0mm (ES-Probe)-BODY/Area Scan (61x121x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 2.739 mW/g

**835body/d=15mm, Pin=250 mW, dist=3.0mm (ES-Probe)-BODY/Zoom Scan (7x7x7) (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 40.410 V/m; Power Drift = 0.05 dB

Peak SAR (extrapolated) = 3.6030

SAR(1 g) = 2.32 mW/g; SAR(10 g) = 1.51 mW/g

Maximum value of SAR (measured) = 2.712 mW/g
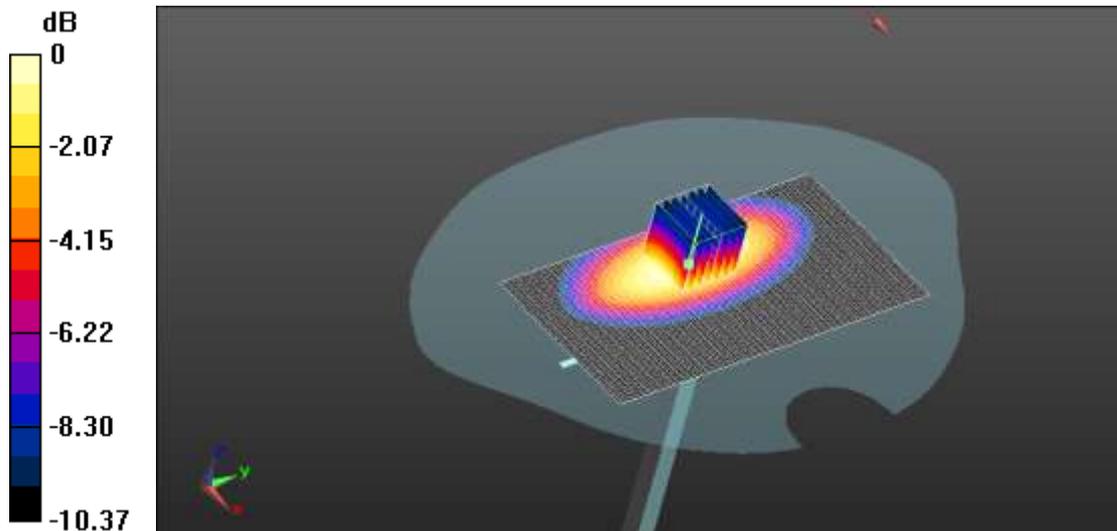
0 dB = 2.710mW/g = 8.66 dB mW/g

System check 1900 head

Date/Time: 2012-4-19 6:22:44

Communication System: CW; Communication System Band: D1900 (1900.0 MHz);
Frequency: 1900 MHz; Communication System PAR: 0 dB

Medium parameters used: f = 1900 MHz; σ = 1.431 mho/m; ε_r = 38.934; ρ = 1000 kg/m^3

Phantom section: Flat Section

Measurement Standard: DASY5 (EN62209-2-2010)

DASY5 Configuration:

- Probe: ES3DV3 - SN3241; ConvF(5.09, 5.09, 5.09);
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1226; Calibrated: 2011-6-13
- Phantom: SAM2; Type: SAM; Serial: TP-1575
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.4 (4989)

1900head/d=10mm, Pin=250 mW, dist=3.0mm (ES-Probe)/Area Scan (41x61x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 12.948 mW/g

**1900head/d=10mm, Pin=250 mW, dist=3.0mm (ES-Probe)/Zoom Scan (7x7x7) (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 71.386 V/m; Power Drift = 0.11 dB

Peak SAR (extrapolated) = 17.6470

SAR(1 g) = 9.42 mW/g; SAR(10 g) = 4.81 mW/g

Maximum value of SAR (measured) = 11.970 mW/g
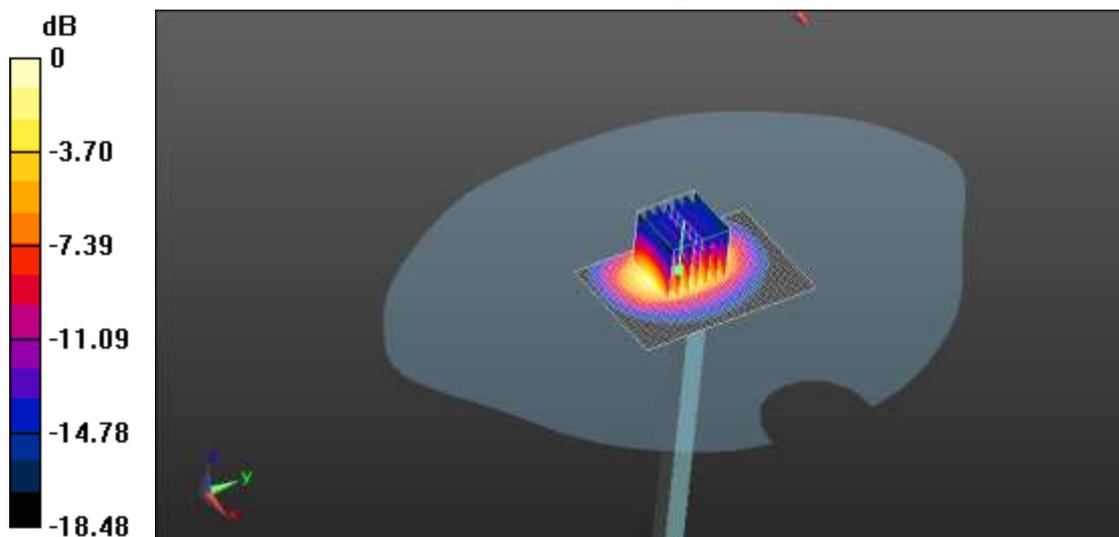
0 dB = 11.970mW/g = 21.56 dB mW/g

System check 1900body
Date/Time: 2012/4/22 8:37:22
Communication System: CW; Communication System Band: D1900 (1900.0 MHz);
Frequency: 1900 MHz; Communication System PAR: 0 dB
Medium parameters used: f = 1900 MHz; σ = 1.51 mho/m; ε_r = 53.45; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)
DASY5 Configuration:

- Probe: ES3DV3 - SN3241; ConvF(4.67, 4.67, 4.67);
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1226; Calibrated: 2011/6/13
- Phantom: SAM2; Type: SAM; Serial: TP-1575
- Measurement SW: DASY52, Version 52.2 (0); SEMCAD X Version 14.6.4 (4989)

1900body/d=10mm, Pin=250 mW, dist=3.0mm (ES-Probe)/Area Scan (41x61x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 13.491 mW/g

**1900body/d=10mm, Pin=250 mW, dist=3.0mm (ES-Probe)/Zoom Scan (7x7x7) (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 58.735 V/m; Power Drift = 0.12 dB
Peak SAR (extrapolated) = 19.2860
SAR(1 g) = 10.3 mW/g; SAR(10 g) = 5.12 mW/g
Maximum value of SAR (measured) = 13.512 mW/g
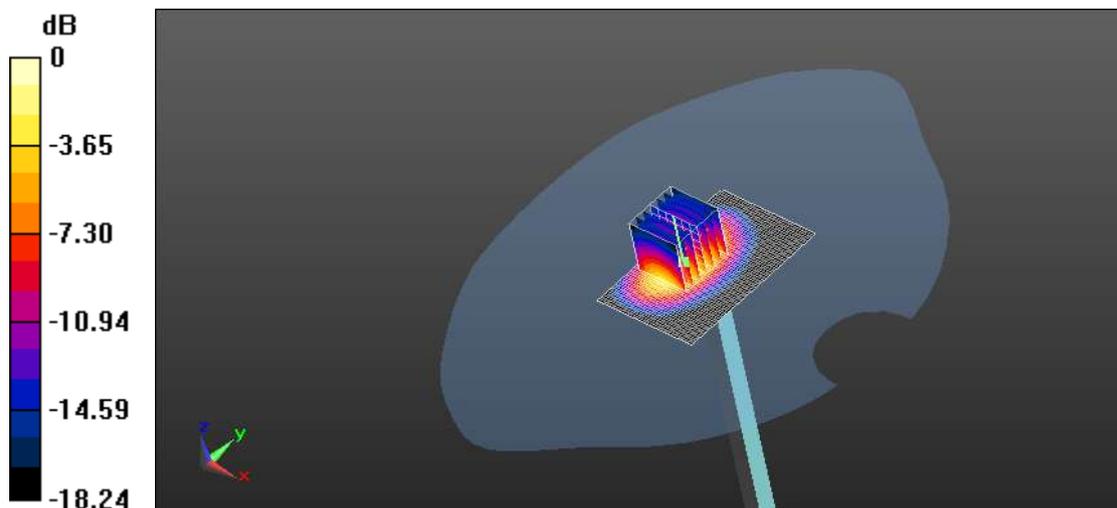
0 dB = 13.510mW/g = 22.61 dB mW/g

System check 1900body

Date/Time: 2012-5-17 9:53:57

Communication System: CW; Communication System Band: D1900 (1900.0 MHz);
Frequency: 1900 MHz; Communication System PAR: 0 dB

Medium parameters used: f = 1900 MHz; σ = 1.495 mho/m; ε_r = 52.357; ρ = 1000 kg/m^3

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE-1528/OET65C)

DASY5 Configuration:

- Probe: ES3DV3 - SN3241; ConvF(4.67, 4.67, 4.67);
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1327; Calibrated: 2012-4-11
- Phantom: SAM 1; Type: SAM; Serial: TP:1702
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.4 (4989)

1900body/d=10mm, Pin=250 mW, dist=3.0mm (ES-Probe)/Area Scan (41x61x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 12.477 mW/g

1900body/d=10mm, Pin=250 mW, dist=3.0mm (ES-Probe)/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 95.715 V/m; Power Drift = 0.05 dB

Peak SAR (extrapolated) = 17.7780

SAR(1 g) = 9.77 mW/g; SAR(10 g) = 5.01 mW/g

Maximum value of SAR (measured) = 12.436 mW/g
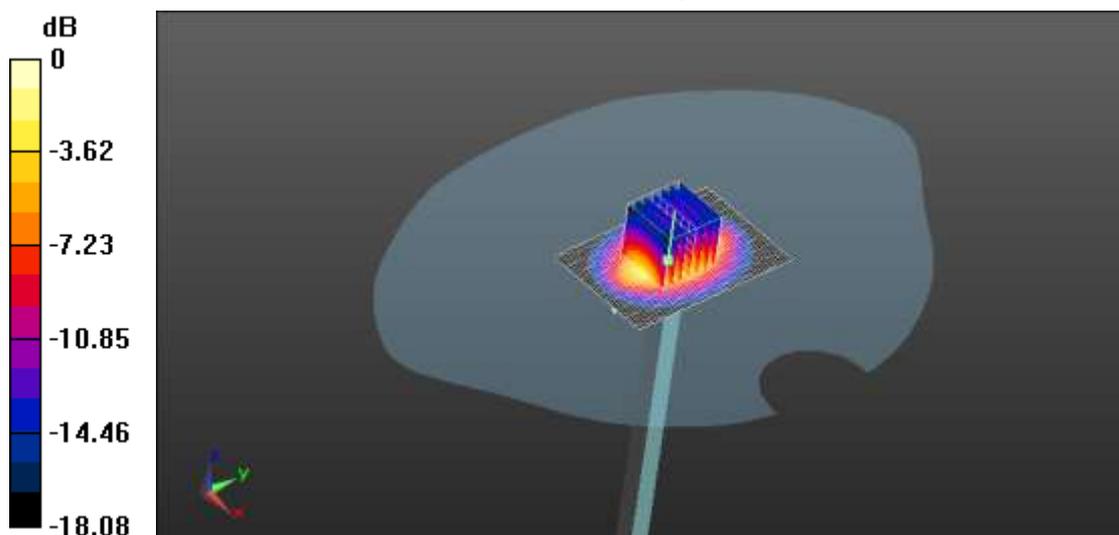
0 dB = 12.440mW/g = 21.90 dB mW/g

System check 2450 head

Date/Time: 2012-4-24 18:46:22

Communication System: CW; Communication System Band: D2450 (2450.0 MHz);

Frequency: 2450 MHz; Communication System PAR: 0 dB

Medium parameters used: f = 2450 MHz; σ = 1.78 mho/m; ε_r = 37.9; ρ = 1000 kg/m^3

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE-1528/OET 65C)

DASY5 Configuration:

- Probe: ES3DV3 - SN3241; ConvF(4.45, 4.45, 4.45);
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1226; Calibrated: 2011-6-13
- Phantom: SAM2; Type: SAM; Serial: TP-1575
- Measurement SW: DASY52, V52.2 Build 0; Postprocessing SW: SEMCAD X, V14.2 Build 2Version 14.2.2 (1685) (Deployment Build)

2450head/d=10mm, Pin=250 mW, dist=3.0mm (ES-Probe)/Area Scan (41x61x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR   = 19.2 mW/g

2450head/d=10mm, Pin=250 mW, dist=3.0mm (ES-Probe)/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 91.8 V/m; Power Drift = 0.053 dB

Peak SAR (extrapolated) = 28.4 W/kg

SAR(1 g) = 13.2 mW/g; SAR(10 g) = 5.93 mW/g

Maximum value of SAR (measured) = 17.6 mW/g
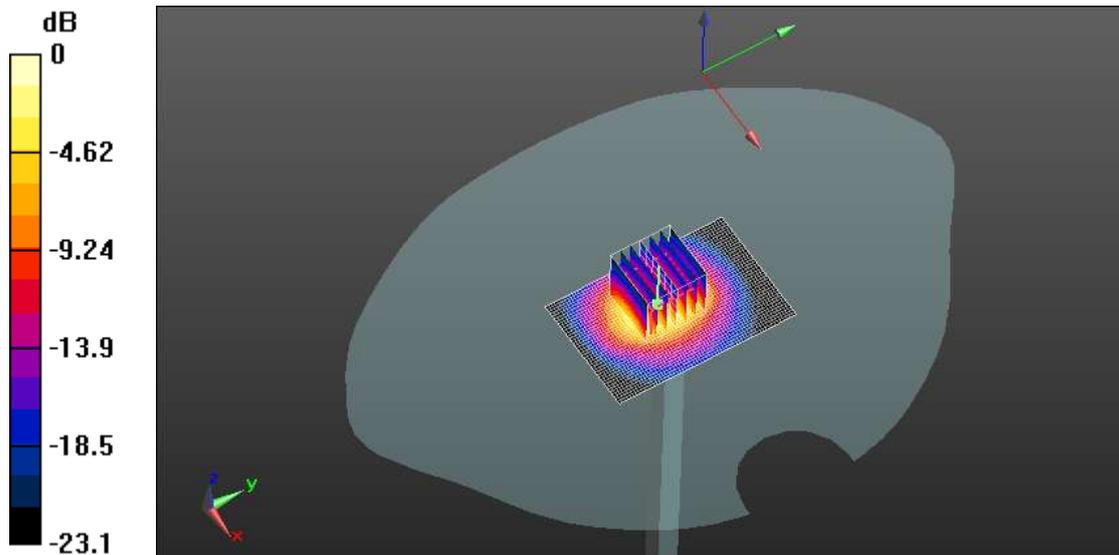
0 dB = 17.6mW/g

System check 2450body

Date/Time: 2012/4/24 7:31:05

Communication System: CW; Communication System Band: D2450 (2450.0 MHz);

Frequency: 2450 MHz; Communication System PAR: 0 dB

Medium parameters used: f = 2450 MHz; σ = 1.921 mho/m; ε_r = 51.932; ρ = 1000 kg/m^3

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: ES3DV3 - SN3241; ConvF(4.29, 4.29, 4.29);
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1226; Calibrated: 2011/6/13
- Phantom: SAM2; Type: SAM; Serial: TP-1575
- Measurement SW: DASY52, Version 52.2 (0); SEMCAD X Version 14.6.4 (4989)

2450body/d=10mm, Pin=250 mW, dist=3.0mm (ES-Probe)/Area Scan (41x61x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 19.076 mW/g

**2450body/d=10mm, Pin=250 mW, dist=3.0mm (ES-Probe)/Zoom Scan (7x7x7) (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 64.137 V/m; Power Drift = 0.09 dB

Peak SAR (extrapolated) = 29.0830

SAR(1 g) = 13.8 mW/g; SAR(10 g) = 6.28 mW/g

Maximum value of SAR (measured) = 18.371 mW/g
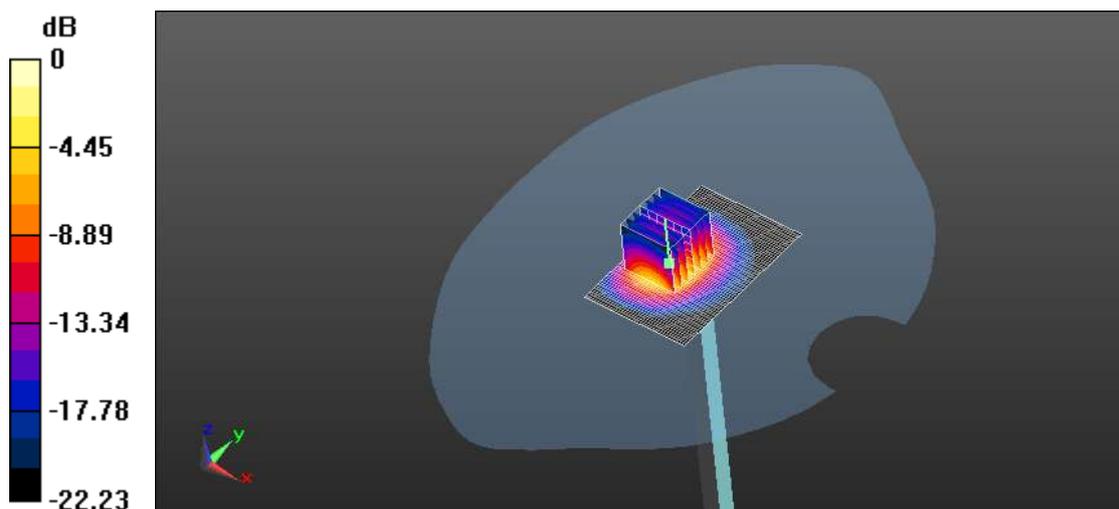
0 dB = 18.370mW/g = 25.28 dB mW/g

ANNEX F: Graph Result

GSM850 left Touch mid

Date/Time: 2012/4/20 3:43:36

Communication System: Generic GSM; Communication System Band: GSM 850 (824.0 - 849.0 MHz); Frequency: 836.6 MHz; Communication System PAR: 9.191 dB

Medium parameters used (interpolated): f = 836.6 MHz; σ = 0.883 mho/m; ε_r = 41.292; ρ = 1000 kg/m^3

Phantom section: Left Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: ES3DV3 - SN3241; ConvF(6.18, 6.18, 6.18);
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1226; Calibrated: 2011/6/13
- Phantom: SAM1; Type: SAM; Serial: TP1576
- Measurement SW: DASY52, Version 52.2 (0); SEMCAD X Version 14.6.4 (4989)

left/Touch Position - mid/Area Scan (91x151x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 1.012 mW/g

**left/Touch Position - mid/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 12.896 V/m; Power Drift = -0.15 dB

Peak SAR (extrapolated) = 1.3480

SAR(1 g) = 0.969 mW/g; SAR(10 g) = 0.693 mW/g

Maximum value of SAR (measured) = 1.051 mW/g

left/Touch Position - mid/Zoom Scan (7x7x7)/Cube 1: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 12.896 V/m; Power Drift = -0.15 dB

Peak SAR (extrapolated) = 1.2850

SAR(1 g) = 0.957 mW/g; SAR(10 g) = 0.673 mW/g

Maximum value of SAR (measured) = 1.027 mW/g
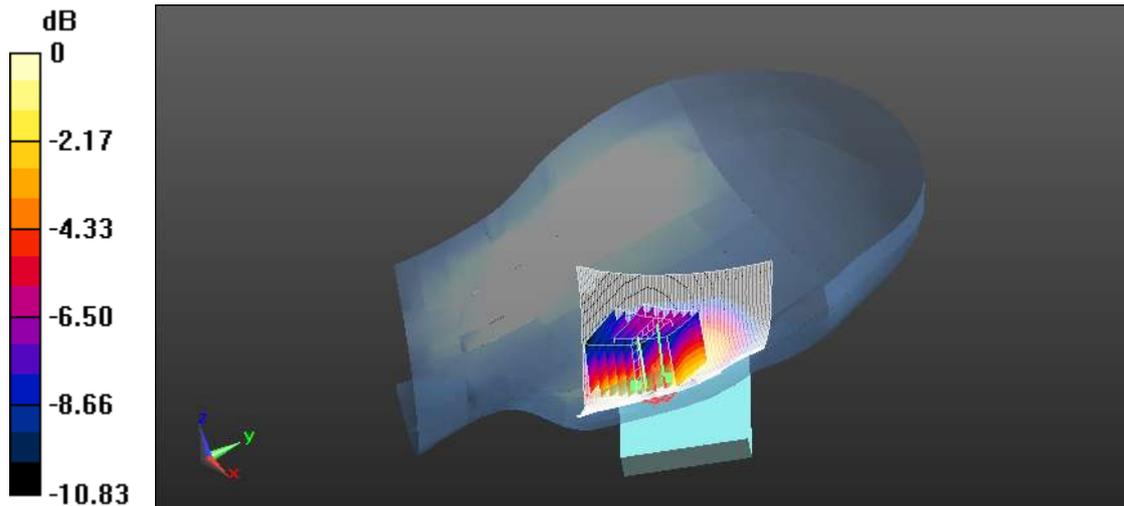
0 dB = 1.030mW/g = 0.26 dB mW/g
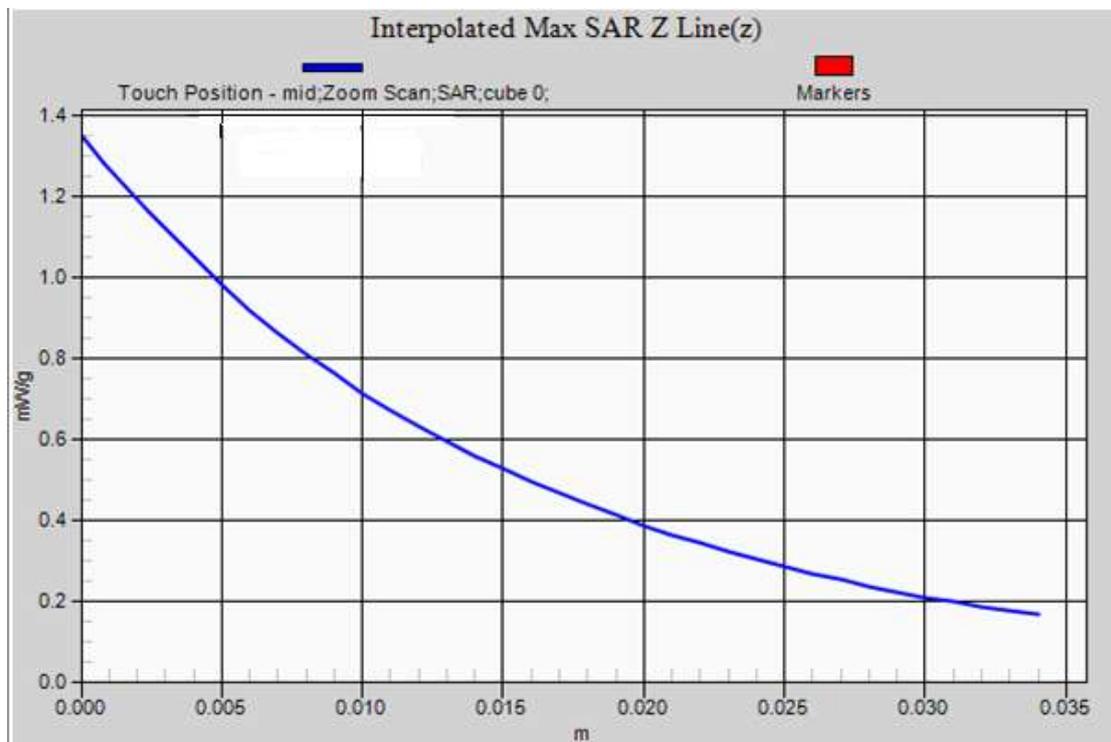
GSM850 left Tilt mid

Date/Time: 2012/4/20 5:51:29

Communication System: Generic GSM; Communication System Band: GSM 850 (824.0 - 849.0 MHz); Frequency: 836.6 MHz; Communication System PAR: 9.191 dB

Medium parameters used (interpolated): f = 836.6 MHz; σ = 0.883 mho/m; ε_r = 41.292; ρ = 1000 kg/m^3

Phantom section: Left Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: ES3DV3 - SN3241; ConvF(6.18, 6.18, 6.18);
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1226; Calibrated: 2011/6/13
- Phantom: SAM1; Type: SAM; Serial: TP1576
- Measurement SW: DASY52, Version 52.2 (0); SEMCAD X Version 14.6.4 (4989)

left/Tilt Position - mid/Area Scan (91x151x1): Measurement grid: dx=10mm, dy=10mm.

Maximum value of SAR (interpolated) = 0.546 mW/g

**left/Tilt Position - mid/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 17.770 V/m; Power Drift = -0.09 dB

Peak SAR (extrapolated) = 0.6510

SAR(1 g) = 0.514 mW/g; SAR(10 g) = 0.391 mW/g

Maximum value of SAR (measured) = 0.538 mW/g
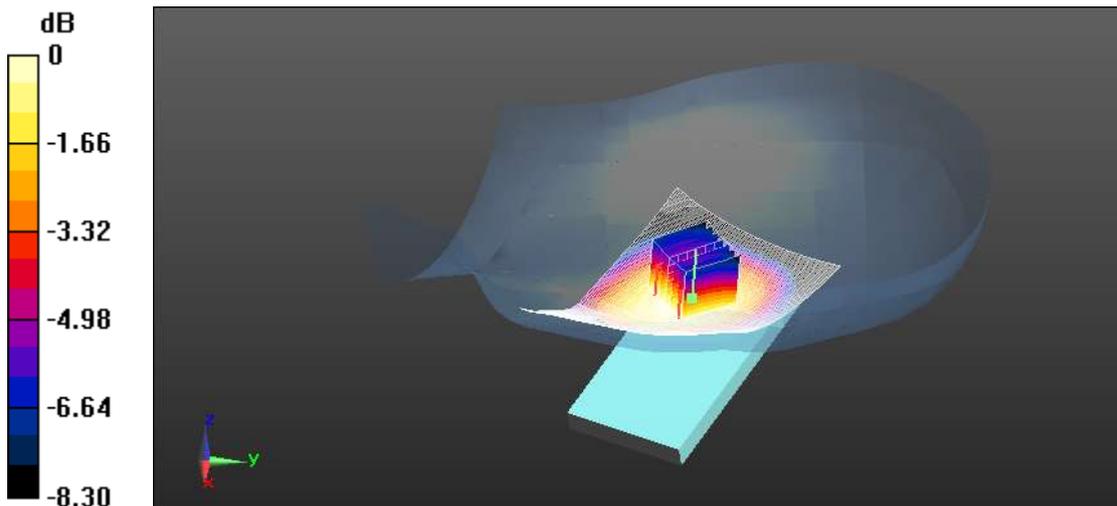
0 dB = 0.540mW/g = -5.35 dB mW/g

GSM850 right Touch mid

Date/Time: 2012/4/20 1:35:12

Communication System: Generic GSM; Communication System Band: GSM 850 (824.0 - 849.0 MHz); Frequency: 836.6 MHz; Communication System PAR: 9.191 dB

Medium parameters used (interpolated): f = 836.6 MHz; σ = 0.883 mho/m; ε_r = 41.292; ρ = 1000 kg/m^3

Phantom section: Right Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: ES3DV3 - SN3241; ConvF(6.18, 6.18, 6.18);
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1226; Calibrated: 2011/6/13
- Phantom: SAM1; Type: SAM; Serial: TP1576
- Measurement SW: DASY52, Version 52.2 (0); SEMCAD X Version 14.6.4 (4989)

right/Touch Position - mid/Area Scan (91x151x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.993 mW/g

right/Touch Position - mid/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 12.615 V/m; Power Drift = -0.04 dB

Peak SAR (extrapolated) = 1.1910

SAR(1 g) = 0.951 mW/g; SAR(10 g) = 0.712 mW/g

Maximum value of SAR (measured) = 0.999 mW/g
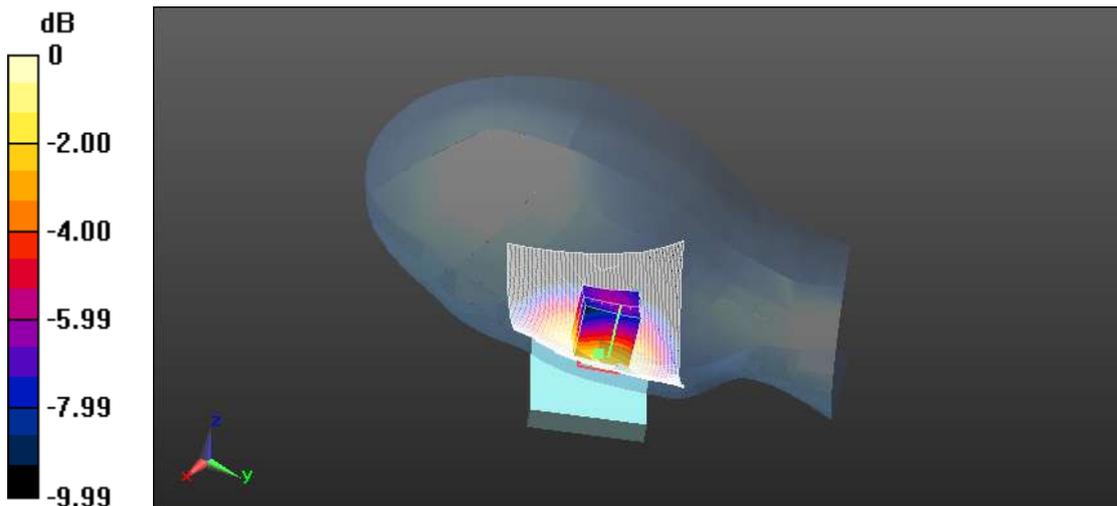
0 dB = 1.000mW/g = 0 dB mW/g

GSM850 right Tilt mid

Date/Time: 2012/4/20 3:11:45

Communication System: Generic GSM; Communication System Band: GSM 850 (824.0 - 849.0 MHz); Frequency: 836.6 MHz; Communication System PAR: 9.191 dB

Medium parameters used (interpolated): f = 836.6 MHz; σ = 0.883 mho/m; ε_r = 41.292; ρ = 1000 kg/m^3

Phantom section: Right Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: ES3DV3 - SN3241; ConvF(6.18, 6.18, 6.18);
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1226; Calibrated: 2011/6/13
- Phantom: SAM1; Type: SAM; Serial: TP1576
- Measurement SW: DASY52, Version 52.2 (0); SEMCAD X Version 14.6.4 (4989)

right/Tilt Position - mid/Area Scan (91x151x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.532 mW/g

**right/Tilt Position - mid/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 17.186 V/m; Power Drift = 0.03 dB

Peak SAR (extrapolated) = 0.6330

SAR(1 g) = 0.497 mW/g; SAR(10 g) = 0.377 mW/g

Maximum value of SAR (measured) = 0.527 mW/g
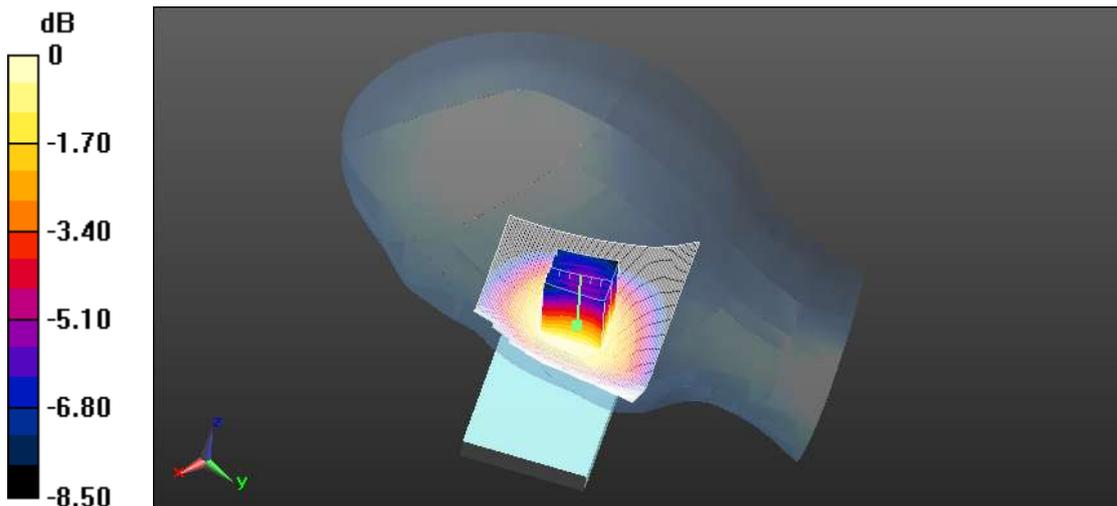
0 dB = 0.530mW/g = -5.51 dB mW/g

GSM850 left Touch low

Date/Time: 2012/4/20 4:24:52

Communication System: Generic GSM; Communication System Band: GSM 850 (824.0 - 849.0 MHz); Frequency: 824.2 MHz; Communication System PAR: 9.191 dB

Medium parameters used (interpolated): f = 824.2 MHz; σ = 0.871 mho/m; ε_r = 41.448; ρ = 1000 kg/m^3

Phantom section: Left Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: ES3DV3 - SN3241; ConvF(6.18, 6.18, 6.18);
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1226; Calibrated: 2011/6/13
- Phantom: SAM1; Type: SAM; Serial: TP1576
- Measurement SW: DASY52, Version 52.2 (0); SEMCAD X Version 14.6.4 (4989)

left/Touch Position - low/Area Scan (91x151x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.709 mW/g

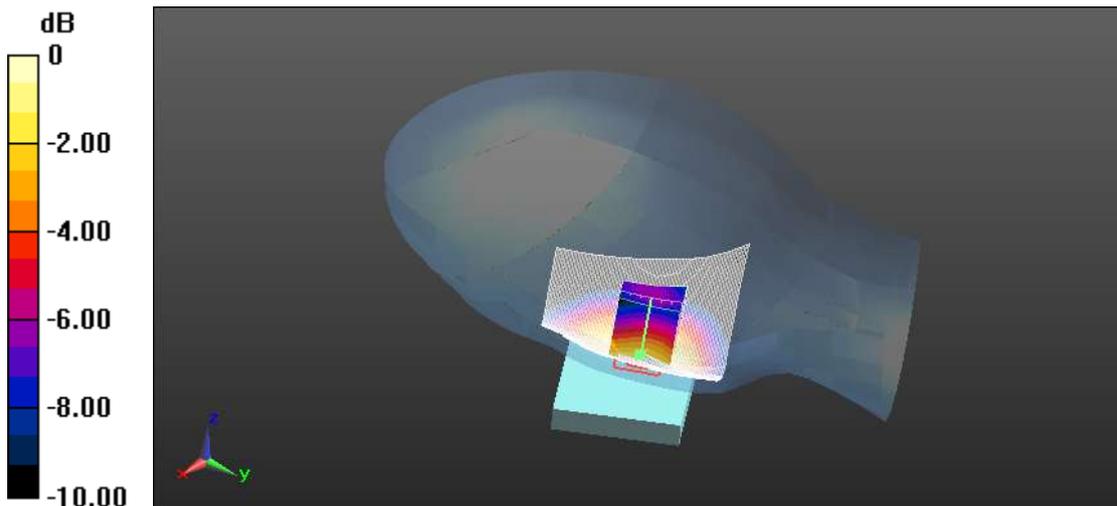**left/Touch Position - low/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 10.969 V/m; Power Drift = 0.09 dB

Peak SAR (extrapolated) = 0.9340

SAR(1 g) = 0.673 mW/g; SAR(10 g) = 0.493 mW/g

Maximum value of SAR (measured) = 0.728 mW/g
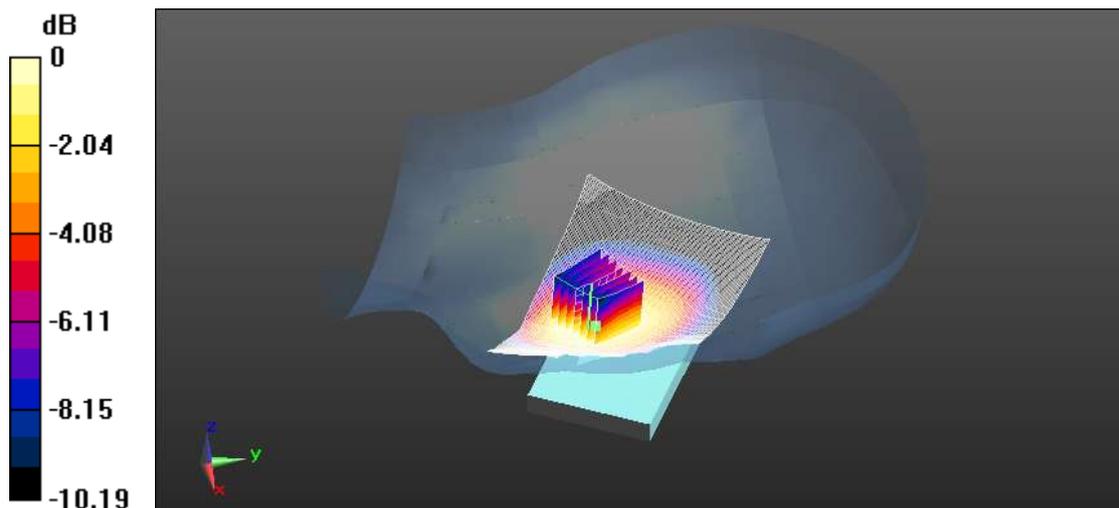
0 dB = 0.730mW/g = -2.73 dB mW/g

GSM850 left Touch high

Date/Time: 2012/4/20 4:56:43

Communication System: Generic GSM; Communication System Band: GSM 850 (824.0 - 849.0 MHz); Frequency: 848.6 MHz; Communication System PAR: 9.191 dB

Medium parameters used (interpolated): f = 848.6 MHz; σ = 0.895 mho/m; ε_r = 41.135; ρ = 1000 kg/m^3

Phantom section: Left Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: ES3DV3 - SN3241; ConvF(6.18, 6.18, 6.18);
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1226; Calibrated: 2011/6/13
- Phantom: SAM1; Type: SAM; Serial: TP1576
- Measurement SW: DASY52, Version 52.2 (0); SEMCAD X Version 14.6.4 (4989)

left/Touch Position - high/Area Scan (91x151x1): Measurement grid: dx=10mm, dy=10mm
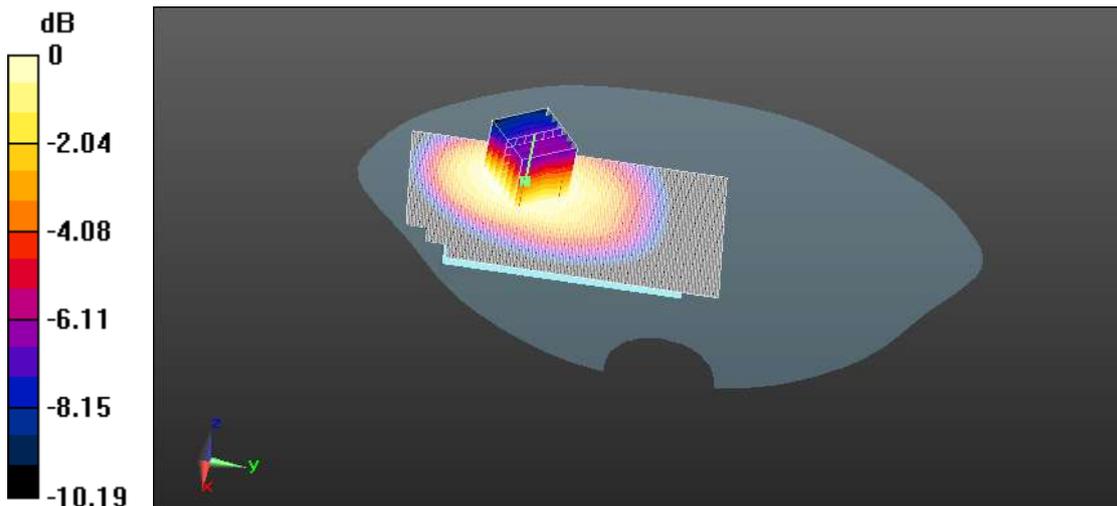
Maximum value of SAR (interpolated) = 0.884 mW/g

left/Touch Position - high/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 12.072 V/m; Power Drift = -0.14 dB

Peak SAR (extrapolated) = 1.1720

SAR(1 g) = 0.858 mW/g; SAR(10 g) = 0.622 mW/g

Maximum value of SAR (measured) = 0.903 mW/g
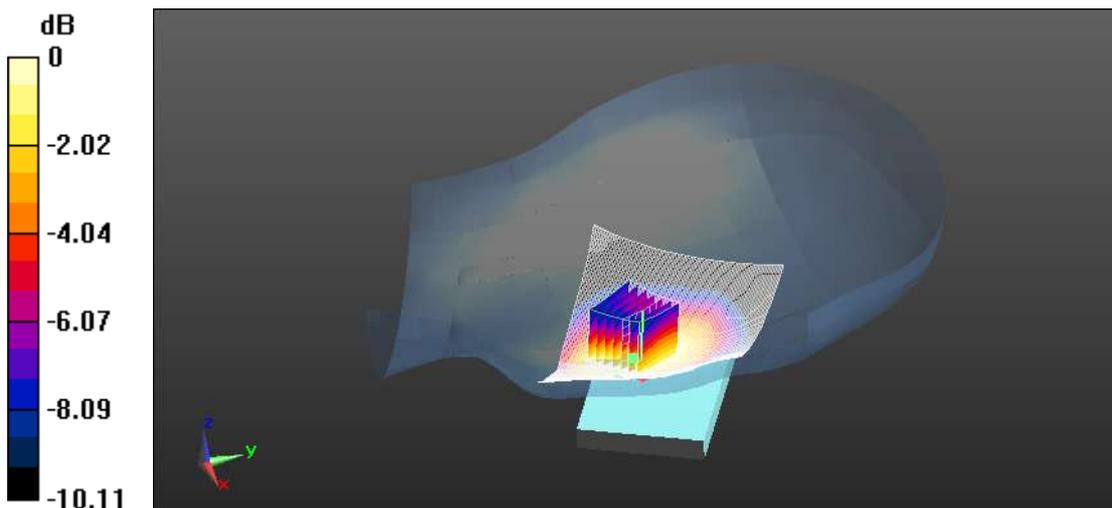
0 dB = 0.900mW/g = -0.92 dB mW/g

GSM850 right Touch low

Date/Time: 2012/4/20 2:10:15

Communication System: Generic GSM; Communication System Band: GSM 850 (824.0 - 849.0 MHz); Frequency: 824.2 MHz; Communication System PAR: 9.191 dB

Medium parameters used (interpolated): f = 824.2 MHz; σ = 0.871 mho/m; ε_r = 41.448; ρ = 1000 kg/m^3

Phantom section: Right Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: ES3DV3 - SN3241; ConvF(6.18, 6.18, 6.18);
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1226; Calibrated: 2011/6/13
- Phantom: SAM1; Type: SAM; Serial: TP1576
- Measurement SW: DASY52, Version 52.2 (0); SEMCAD X Version 14.6.4 (4989)

right/Touch Position - low/Area Scan (91x151x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.721 mW/g

right/Touch Position - low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 11.005 V/m; Power Drift = 0.03 dB

Peak SAR (extrapolated) = 0.8600

SAR(1 g) = 0.686 mW/g; SAR(10 g) = 0.518 mW/g

Maximum value of SAR (measured) = 0.723 mW/g
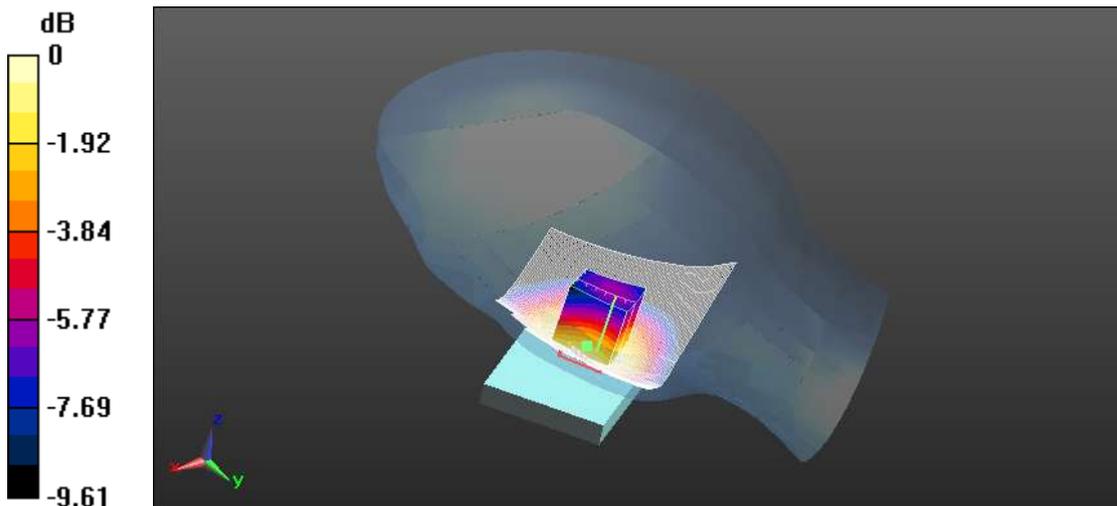
0 dB = 0.720mW/g = -2.85 dB mW/g

GSM850 right Touch high

Date/Time: 2012/4/20 2:42:56

Communication System: Generic GSM; Communication System Band: GSM 850 (824.0 - 849.0 MHz); Frequency: 848.6 MHz; Communication System PAR: 9.191 dB

Medium parameters used (interpolated): f = 848.6 MHz; σ = 0.895 mho/m; ε_r = 41.135; ρ = 1000 kg/m^3

Phantom section: Right Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: ES3DV3 - SN3241; ConvF(6.18, 6.18, 6.18);
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1226; Calibrated: 2011/6/13
- Phantom: SAM1; Type: SAM; Serial: TP1576
- Measurement SW: DASY52, Version 52.2 (0); SEMCAD X Version 14.6.4 (4989)

right/Touch Position - high/Area Scan (91x151x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.891 mW/g

right/Touch Position - high/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 11.503 V/m; Power Drift = 0.10 dB

Peak SAR (extrapolated) = 1.0840

SAR(1 g) = 0.846 mW/g; SAR(10 g) = 0.630 mW/g

Maximum value of SAR (measured) = 0.902 mW/g

0 dB = 0.900mW/g = -0.92 dB mW/g

GSM850 Towards phantom mid

Date/Time: 2012/4/21 14:07:04

Communication System: Generic GSM; Communication System Band: GSM 850 (824.0 - 849.0 MHz); Frequency: 836.6 MHz; Communication System PAR: 9.191 dB

Medium parameters used: f = 837 MHz; σ = 0.951 mho/m; ε_r = 54.241; ρ = 1000 kg/m^3

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: ES3DV3 - SN3241; ConvF(6.19, 6.19, 6.19);
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1226; Calibrated: 2011/6/13
- Phantom: SAM1; Type: SAM; Serial: TP1576
- Measurement SW: DASY52, Version 52.2 (0); SEMCAD X Version 14.6.4 (4989)

body/Towards phantom - mid/Area Scan (91x151x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 1.034 mW/g

body/Towards phantom - mid/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 10.417 V/m; Power Drift = -0.05 dB

Peak SAR (extrapolated) = 1.3100

SAR(1 g) = 0.959 mW/g; SAR(10 g) = 0.706 mW/g

Maximum value of SAR (measured) = 1.015 mW/g

0 dB = 1.010mW/g = 0.09 dB mW/g

GSM850 Towards ground mid

Date/Time: 2012/4/21 14:46:33

Communication System: Generic GSM; Communication System Band: GSM 850 (824.0 - 849.0 MHz); Frequency: 836.6 MHz; Communication System PAR: 9.191 dB

Medium parameters used: f = 837 MHz; σ = 0.951 mho/m; ε_r = 54.241; ρ = 1000 kg/m^3

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: ES3DV3 - SN3241; ConvF(6.19, 6.19, 6.19);
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1226; Calibrated: 2011/6/13
- Phantom: SAM1; Type: SAM; Serial: TP1576
- Measurement SW: DASY52, Version 52.2 (0); SEMCAD X Version 14.6.4 (4989)

body/Towards ground - mid/Area Scan (91x151x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 1.023 mW/g

body/Towards ground - mid/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 11.946 V/m; Power Drift = 0.04 dB

Peak SAR (extrapolated) = 1.3110

SAR(1 g) = 0.973 mW/g; SAR(10 g) = 0.706 mW/g

Maximum value of SAR (measured) = 1.029 mW/g
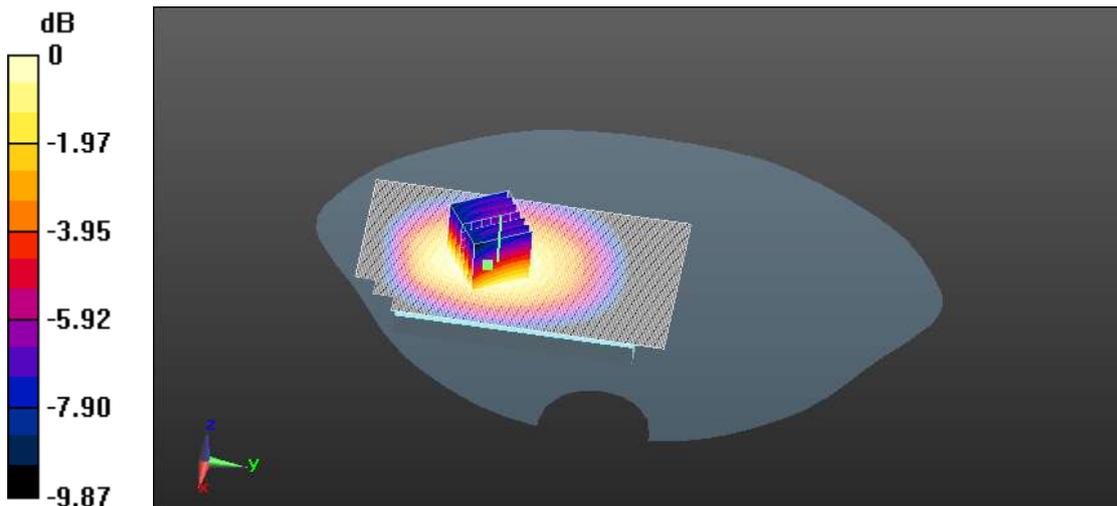
0 dB = 1.030mW/g = 0.26 dB mW/g

GSM850 Towards phantom low

Date/Time: 2012/4/21 19:24:13

Communication System: Generic GSM; Communication System Band: GSM 850 (824.0 - 849.0 MHz); Frequency: 824.2 MHz; Communication System PAR: 9.191 dB

Medium parameters used (interpolated): f = 824.2 MHz; σ = 0.933 mho/m; $ε_r$ = 54.311; ρ = 1000 kg/m^3

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: ES3DV3 - SN3241; ConvF(6.19, 6.19, 6.19);
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1226; Calibrated: 2011/6/13
- Phantom: SAM1; Type: SAM; Serial: TP1576
- Measurement SW: DASY52, Version 52.2 (0); SEMCAD X Version 14.6.4 (4989)

body/Towards phantom - low/Area Scan (91x151x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.890 mW/g

body/Towards phantom - low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 9.033 V/m; Power Drift = -0.01 dB

Peak SAR (extrapolated) = 1.1240

SAR(1 g) = 0.845 mW/g; SAR(10 g) = 0.628 mW/g

Maximum value of SAR (measured) = 0.897 mW/g
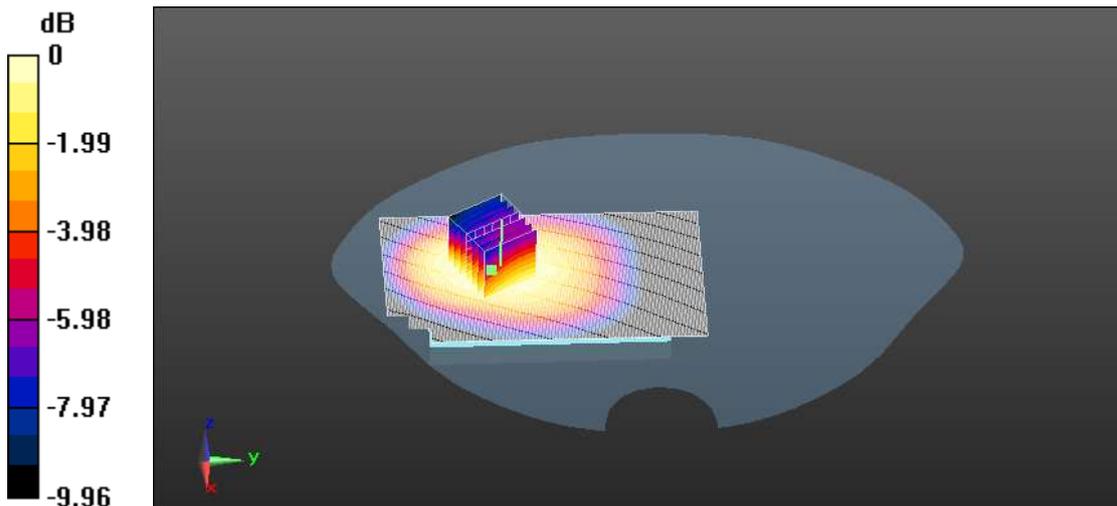
0 dB = 0.900mW/g = -0.92 dB mW/g

GSM850 Towards phantom high

Date/Time: 2012/4/21 19:55:12

Communication System: Generic GSM; Communication System Band: GSM 850 (824.0 - 849.0 MHz); Frequency: 848.6 MHz; Communication System PAR: 9.191 dB

Medium parameters used: f = 849 MHz; σ = 0.967 mho/m; ε_r = 54.15; ρ = 1000 kg/m^3

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: ES3DV3 - SN3241; ConvF(6.19, 6.19, 6.19);
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1226; Calibrated: 2011/6/13
- Phantom: SAM1; Type: SAM; Serial: TP1576
- Measurement SW: DASY52, Version 52.2 (0); SEMCAD X Version 14.6.4 (4989)

body/Towards phantom - high/Area Scan (91x151x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.936 mW/g

body/Towards phantom - high/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 9.210 V/m; Power Drift = -0.13 dB

Peak SAR (extrapolated) = 1.1760

SAR(1 g) = 0.880 mW/g; SAR(10 g) = 0.652 mW/g

Maximum value of SAR (measured) = 0.925 mW/g
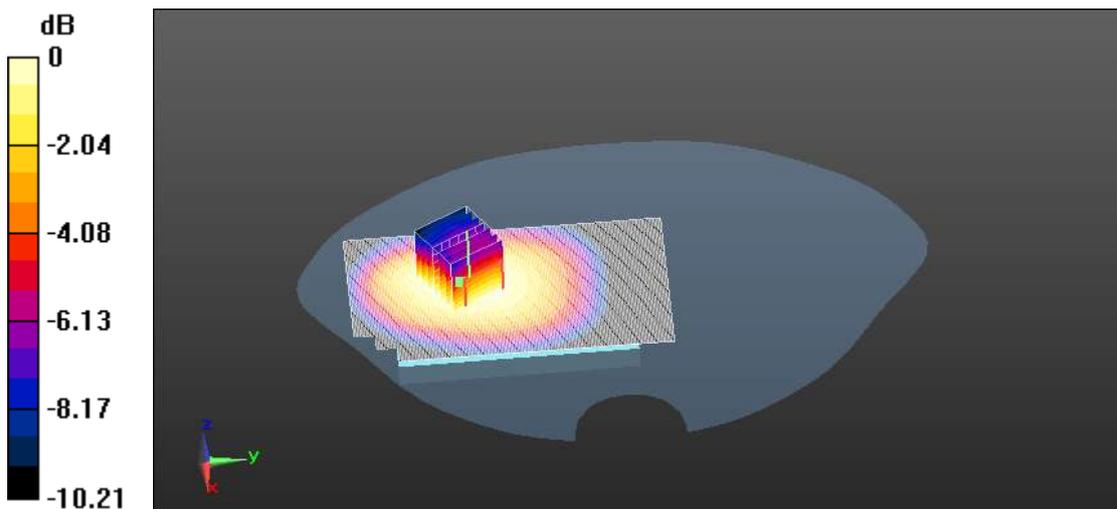
0 dB = 0.920mW/g = -0.72 dB mW/g

GSM850 Towards ground low

Date/Time: 2012/4/21 20:58:11

Communication System: Generic GSM; Communication System Band: GSM 850 (824.0 - 849.0 MHz); Frequency: 824.2 MHz; Communication System PAR: 9.191 dB

Medium parameters used (interpolated): f = 824.2 MHz; σ = 0.933 mho/m; ε_r = 54.311; ρ = 1000 kg/m^3

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: ES3DV3 - SN3241; ConvF(6.19, 6.19, 6.19);
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1226; Calibrated: 2011/6/13
- Phantom: SAM1; Type: SAM; Serial: TP1576
- Measurement SW: DASY52, Version 52.2 (0); SEMCAD X Version 14.6.4 (4989)

body/Towards ground - low/Area Scan (91x151x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 1.141 mW/g

**body/Towards ground - low/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 12.241 V/m; Power Drift = -0.10 dB

Peak SAR (extrapolated) = 1.4410

SAR(1 g) = 1.07 mW/g; SAR(10 g) = 0.781 mW/g

Maximum value of SAR (measured) = 1.128 mW/g

0 dB = 1.130mW/g = 1.06 dB mW/g

Interpolated Max SAR Z Line(z)
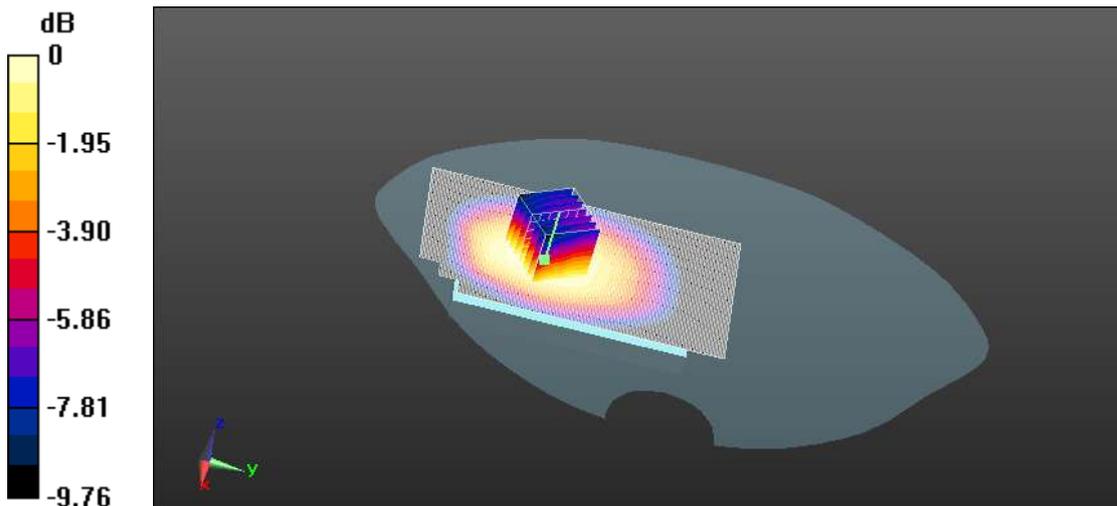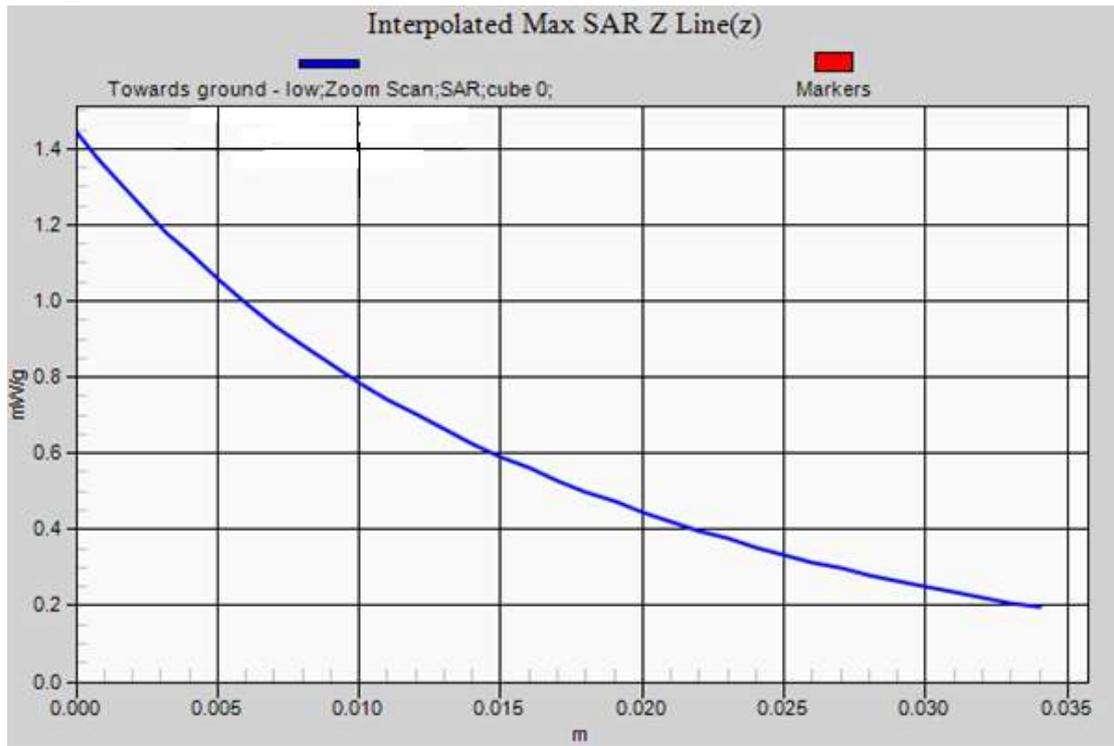
GSM850 Towards ground high

Date/Time: 2012/4/21 20:26:09

Communication System: Generic GSM; Communication System Band: GSM 850 (824.0 - 849.0 MHz); Frequency: 848.6 MHz; Communication System PAR: 9.191 dB

Medium parameters used: f = 849 MHz; σ = 0.967 mho/m; ε_r = 54.15; ρ = 1000 kg/m^3

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: ES3DV3 - SN3241; ConvF(6.19, 6.19, 6.19);
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1226; Calibrated: 2011/6/13
- Phantom: SAM1; Type: SAM; Serial: TP1576
- Measurement SW: DASY52, Version 52.2 (0); SEMCAD X Version 14.6.4 (4989)

body/Towards ground - high/Area Scan (91x151x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 1.061 mW/g

**body/Towards ground - high/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 11.808 V/m; Power Drift = -0.11 dB

Peak SAR (extrapolated) = 1.3240

SAR(1 g) = 0.983 mW/g; SAR(10 g) = 0.711 mW/g

Maximum value of SAR (measured) = 1.042 mW/g
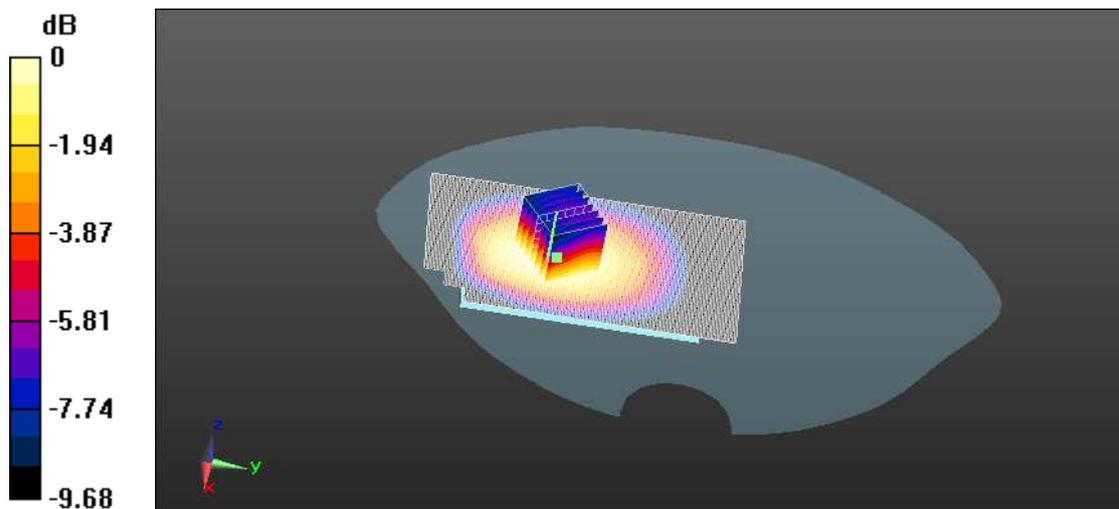
0 dB = 1.040mW/g = 0.34 dB mW/g

GSM850 Towards ground low with earphone

Date/Time: 2012/4/21 21:30:25

Communication System: Generic GSM; Communication System Band: GSM 850 (824.0 - 849.0 MHz); Frequency: 824.2 MHz; Communication System PAR: 9.191 dB

Medium parameters used (interpolated): f = 824.2 MHz; σ = 0.933 mho/m; ε_r = 54.311; ρ = 1000 kg/m^3

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: ES3DV3 - SN3241; ConvF(6.19, 6.19, 6.19);
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1226; Calibrated: 2011/6/13
- Phantom: SAM1; Type: SAM; Serial: TP1576
- Measurement SW: DASY52, Version 52.2 (0); SEMCAD X Version 14.6.4 (4989)

body/Towards ground - low with earphone/Area Scan (91x151x1):

Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.993 mW/g

**body/Towards ground - low with earphone/Zoom Scan (7x7x7)/Cube 0:**

Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 9.714 V/m; Power Drift = 0.10 dB

Peak SAR (extrapolated) = 1.2560

SAR(1 g) = 0.908 mW/g; SAR(10 g) = 0.658 mW/g

Maximum value of SAR (measured) = 0.955 mW/g

body/Towards ground - low with earphone/Zoom Scan (7x7x7)/Cube 1:

Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 9.714 V/m; Power Drift = 0.10 dB

Peak SAR (extrapolated) = 1.5300

SAR(1 g) = 0.892 mW/g; SAR(10 g) = 0.554 mW/g

Maximum value of SAR (measured) = 0.926 mW/g
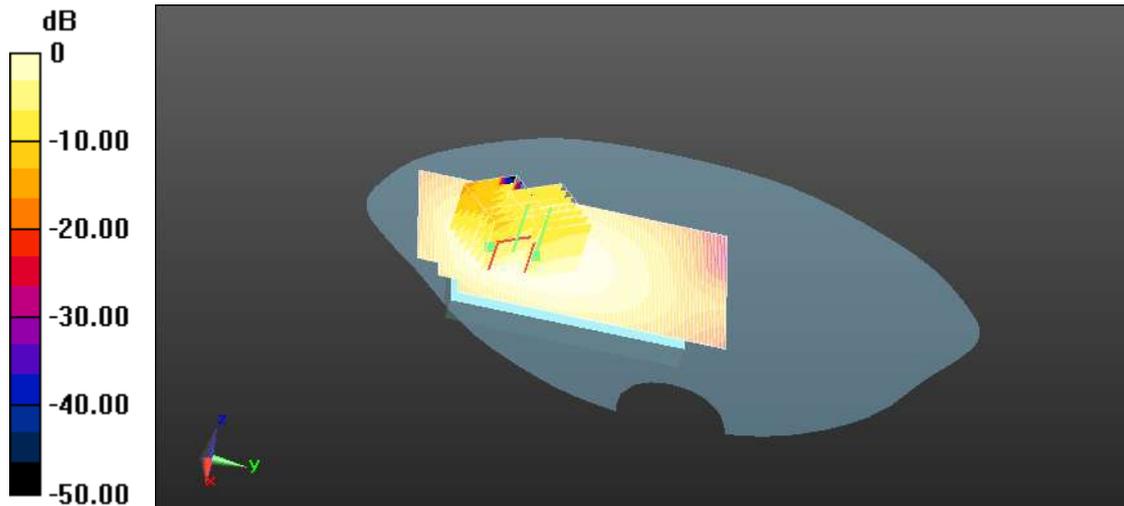
0 dB = 0.930mW/g = -0.63 dB mW/g

GSM850 Towards phantom mid with GPRS

Date/Time: 2012-5-16 10:33:55

Communication System: Generic GSM; Communication System Band: GSM 850 (824.0 - 849.0 MHz); Frequency: 836.6 MHz; Communication System PAR: 9.191 dB

Medium parameters used: f = 837 MHz; σ = 0.951 mho/m; ε_r = 54.241; ρ = 1000 kg/m^3

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE-1528/OET65C)

DASY5 Configuration:

- Probe: ES3DV3 - SN3241; ConvF(6.19, 6.19, 6.19);
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1226; Calibrated: 2011-6-13
- Phantom: SAM1; Type: SAM; Serial: TP1576
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.4 (4989)

body/Towards phantom - mid with GPRS/Area Scan (91x151x1):

Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.979 mW/g

**body/Towards phantom - mid with GPRS/Zoom Scan (7x7x7)/Cube 0:**

Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 9.823 V/m; Power Drift = -0.12 dB

Peak SAR (extrapolated) = 1.2920

SAR(1 g) = 0.924 mW/g; SAR(10 g) = 0.678 mW/g

Maximum value of SAR (measured) = 0.973 mW/g
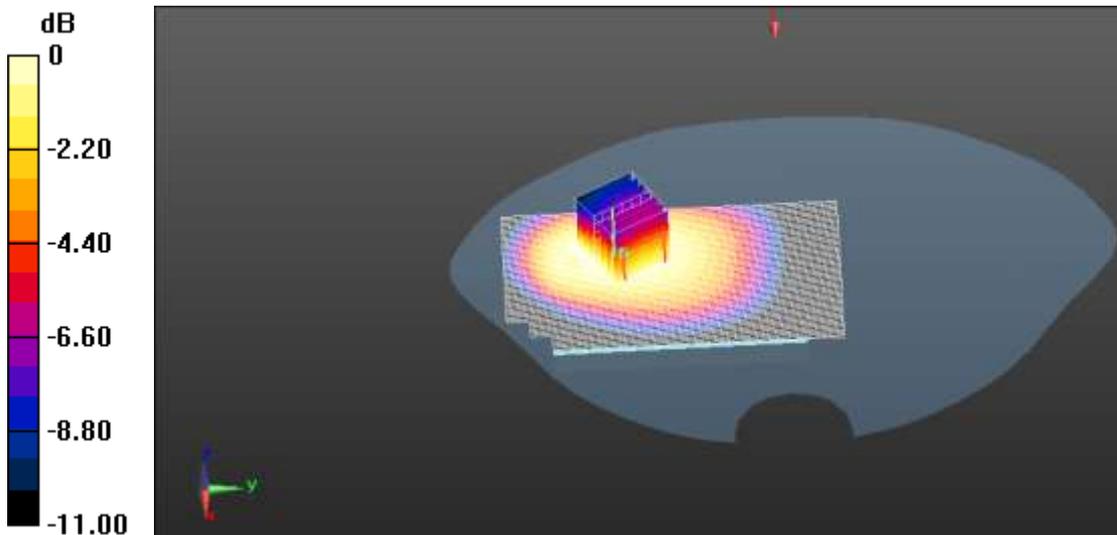
0 dB = 0.970mW/g = -0.26 dB mW/g

GSM850 Towards ground mid with GPRS

Date/Time: 2012-5-16 14:28:58

Communication System: Generic GSM; Communication System Band: GSM 850
(824.0 - 849.0 MHz); Frequency: 836.6 MHz; Communication System PAR: 9.191 dB

Medium parameters used: $f = 837$ MHz; $\sigma = 0.951$ mho/m; $\varepsilon_r = 54.241$; $\rho = 1000$ kg/m^3

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE-1528/OET65C)

DASY5 Configuration:

- Probe: ES3DV3 - SN3241; ConvF(6.19, 6.19, 6.19);
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1226; Calibrated: 2011-6-13
- Phantom: SAM1; Type: SAM; Serial: TP1576
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.4 (4989)

body/Towards ground - mid with GPRS/Area Scan (91x151x1):

Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 1.094 mW/g

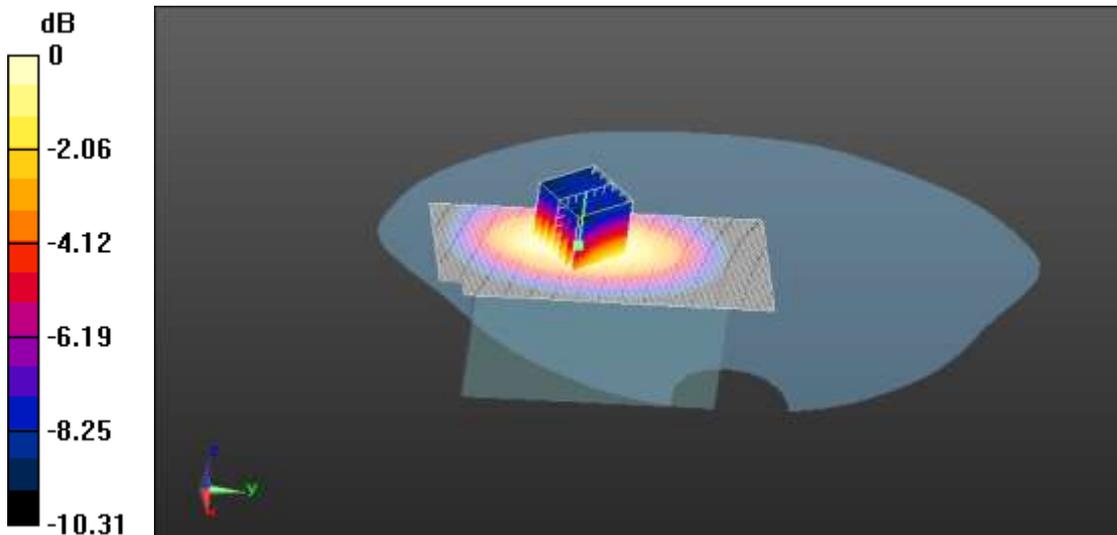**body/Towards ground - mid with GPRS/Zoom Scan (7x7x7)/Cube 0:**

Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 10.006 V/m; Power Drift = 0.04 dB

Peak SAR (extrapolated) = 1.2860

SAR(1 g) = 0.959 mW/g; SAR(10 g) = 0.691 mW/g

Maximum value of SAR (measured) = 1.011 mW/g

body/Towards ground - mid with GPRS/Zoom Scan (7x7x7)/Cube 1:

Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 10.006 V/m; Power Drift = 0.04 dB

Peak SAR (extrapolated) = 1.2820

SAR(1 g) = 0.891 mW/g; SAR(10 g) = 0.586 mW/g

Maximum value of SAR (measured) = 0.990 mW/g
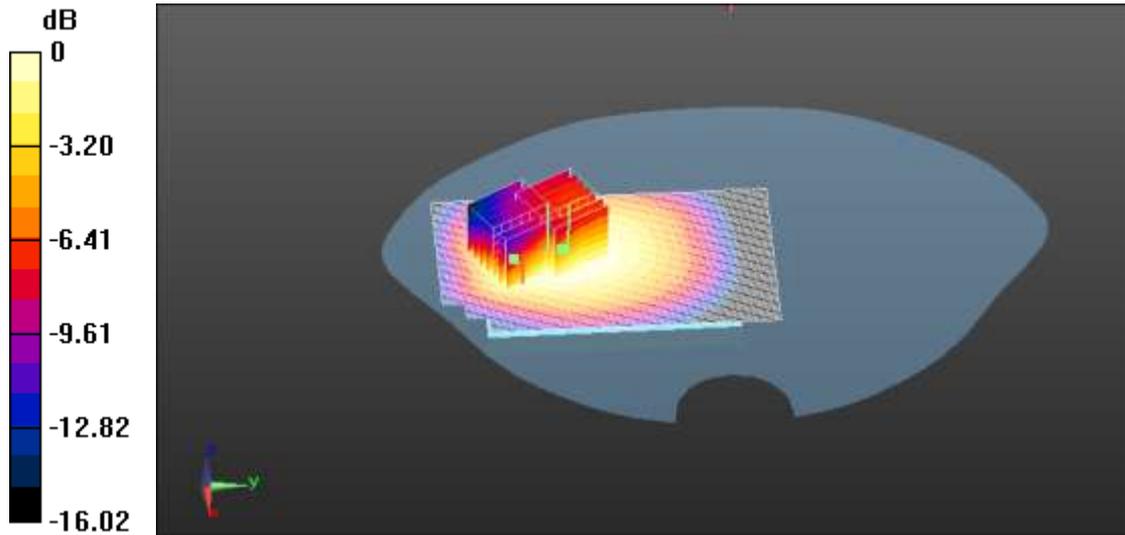
0 dB = 0.990mW/g = -0.09 dB mW/g

GSM850 with front mid with GPRS

Date/Time: 2012-5-17 9:55:21

Communication System: Generic GSM; Communication System Band: GSM 850 (824.0 - 849.0 MHz); Frequency: 836.6 MHz; Communication System PAR: 9.191 dB

Medium parameters used: f = 837 MHz; σ = 0.951 mho/m; ε_r = 54.241; ρ = 1000 kg/m^3

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE-1528/OET65C)

DASY5 Configuration:

- Probe: ES3DV3 - SN3241; ConvF(6.19, 6.19, 6.19);
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1226; Calibrated: 2011-6-13
- Phantom: SAM1; Type: SAM; Serial: TP1576
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.4 (4989)

body/Towards front - mid with GPRS/Area Scan (61x101x1):

Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.199 mW/g

## body/Towards front - mid with GPRS/Zoom Scan (7x7x7)/Cube 0:

Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 9.468 V/m; Power Drift = 0.17 dB

Peak SAR (extrapolated) = 0.5570

SAR(1 g) = 0.189 mW/g; SAR(10 g) = 0.083 mW/g

Maximum value of SAR (measured) = 0.212 mW/g
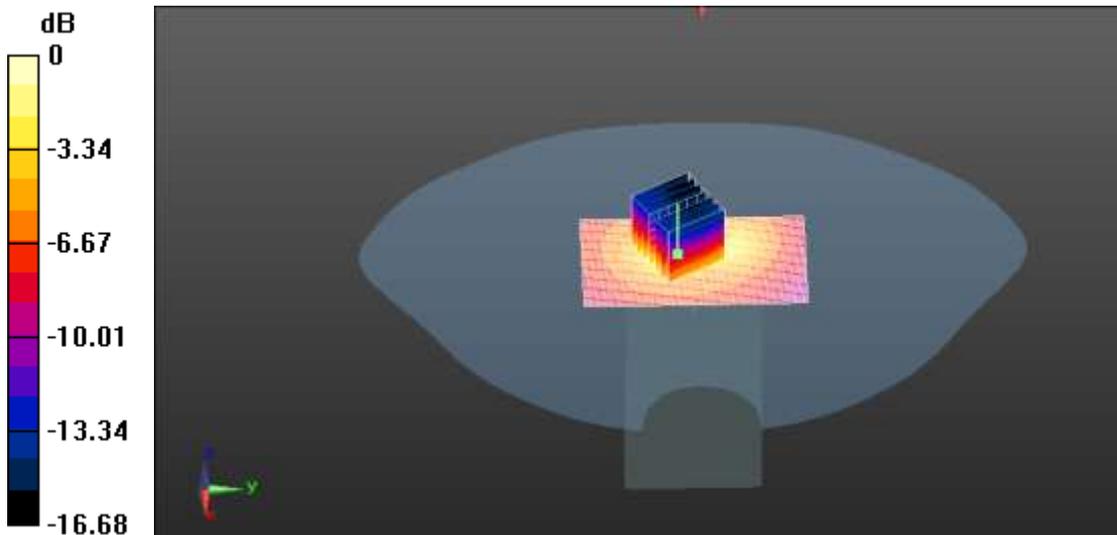
0 dB = 0.210mW/g = -13.56 dB mW/g

GSM850 left side mid with GPRS

Date/Time: 2012-5-16 13:30:01

Communication System: Generic GSM; Communication System Band: GSM 850 (824.0 - 849.0 MHz); Frequency: 836.6 MHz; Communication System PAR: 9.191 dB

Medium parameters used: f = 837 MHz; σ = 0.951 mho/m; ε_r = 54.241; ρ = 1000 kg/m^3

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE-1528/OET65C)

DASY5 Configuration:

- Probe: ES3DV3 - SN3241; ConvF(6.19, 6.19, 6.19);
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1226; Calibrated: 2011-6-13
- Phantom: SAM1; Type: SAM; Serial: TP1576
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.4 (4989)

body2/left side - mid with GPRS/Area Scan (71x151x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.716 mW/g

**body2/left side - mid with GPRS/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 11.232 V/m; Power Drift = 0.10 dB

Peak SAR (extrapolated) = 0.9920

SAR(1 g) = 0.657 mW/g; SAR(10 g) = 0.440 mW/g

Maximum value of SAR (measured) = 0.717 mW/g

0 dB = 0.720mW/g = -2.85 dB mW/g

GSM850 right side mid with GPRS

Date/Time: 2012-5-16 13:58:51

Communication System: Generic GSM; Communication System Band: GSM 850
(824.0 - 849.0 MHz); Frequency: 836.6 MHz; Communication System PAR: 9.191 dB

Medium parameters used: f = 837 MHz; σ = 0.951 mho/m; ε_r = 54.241; ρ = 1000 kg/m^3

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE-1528/OET65C)

DASY5 Configuration:

- Probe: ES3DV3 - SN3241; ConvF(6.19, 6.19, 6.19);
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1226; Calibrated: 2011-6-13
- Phantom: SAM1; Type: SAM; Serial: TP1576
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.4 (4989)

body2/right side - mid with GPRS/Area Scan (71x151x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.540 mW/g

**body2/right side - mid with GPRS/Zoom Scan (7x7x7)/Cube 0:**

Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 9.790 V/m; Power Drift = 0.05 dB

Peak SAR (extrapolated) = 0.7180

SAR(1 g) = 0.501 mW/g; SAR(10 g) = 0.348 mW/g

Maximum value of SAR (measured) = 0.533 mW/g
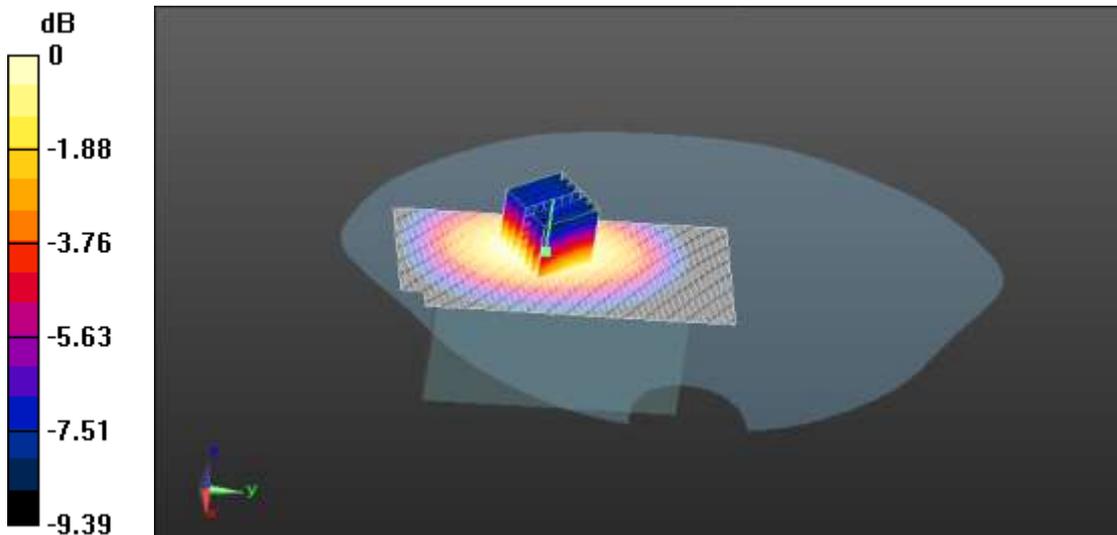
0 dB = 0.530mW/g = -5.51 dB mW/g

GSM850 Towards phantom low with GPRS

Date/Time: 2012-5-16 11:23:25

Communication System: Generic GSM; Communication System Band: GSM 850 (824.0 - 849.0 MHz); Frequency: 824.2 MHz; Communication System PAR: 9.191 dB

Medium parameters used (interpolated): f = 824.2 MHz; σ = 0.933 mho/m; ε_r = 54.311; ρ = 1000 kg/m^3

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE-1528/OET65C)

DASY5 Configuration:

- Probe: ES3DV3 - SN3241; ConvF(6.19, 6.19, 6.19);
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1226; Calibrated: 2011-6-13
- Phantom: SAM1; Type: SAM; Serial: TP1576
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.4 (4989)

body/Towards phantom -low with GPRS/Area Scan (91x151x1):

Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 1.063 mW/g

## body/Towards phantom -low with GPRS/Zoom Scan (7x7x7)/Cube 0:

Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 10.043 V/m; Power Drift = -0.07 dB

Peak SAR (extrapolated) = 1.4150

SAR(1 g) = 0.994 mW/g; SAR(10 g) = 0.723 mW/g

Maximum value of SAR (measured) = 1.056 mW/g
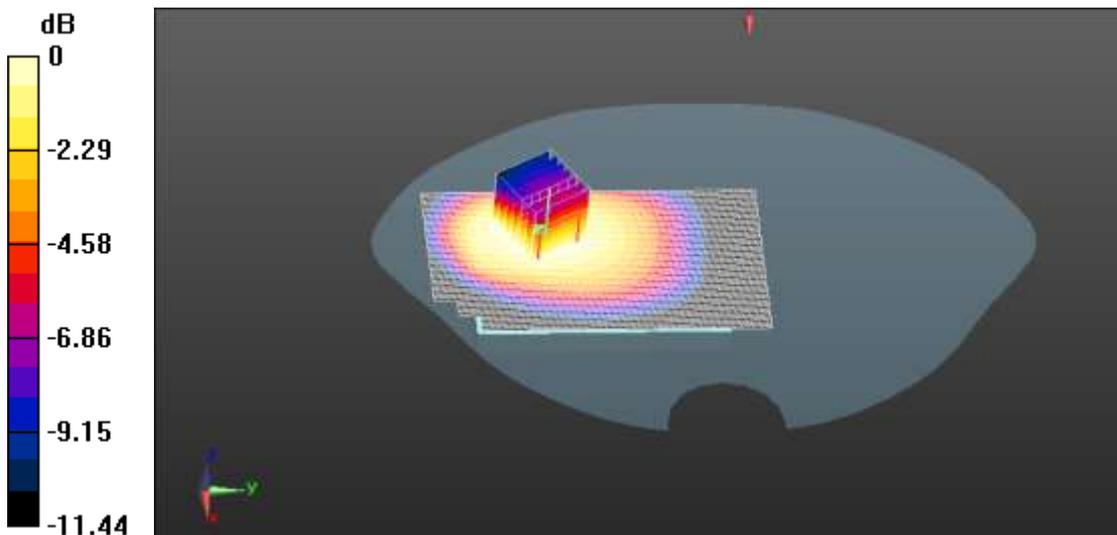
0 dB = 1.060mW/g = 0.51 dB mW/g

GSM850 Towards phantom high with GPRS

Date/Time: 2012-5-16 12:16:25

Communication System: Generic GSM; Communication System Band: GSM 850 (824.0 - 849.0 MHz); Frequency: 848.6 MHz; Communication System PAR: 9.191 dB

Medium parameters used: f = 849 MHz; σ = 0.967 mho/m; ε_r = 54.15; ρ = 1000 kg/m^3

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE-1528/OET65C)

DASY5 Configuration:

- Probe: ES3DV3 - SN3241; ConvF(6.19, 6.19, 6.19);
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1226; Calibrated: 2011-6-13
- Phantom: SAM1; Type: SAM; Serial: TP1576
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.4 (4989)

body/Towards phantom - high with GPRS/Area Scan (91x151x1):

Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 1.009 mW/g

body/Towards phantom - high with GPRS/Zoom Scan (7x7x7)/Cube 0:

Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 9.792 V/m; Power Drift = -0.04 dB

Peak SAR (extrapolated) = 1.3480

SAR(1 g) = 0.959 mW/g; SAR(10 g) = 0.695 mW/g

Maximum value of SAR (measured) = 1.011 mW/g
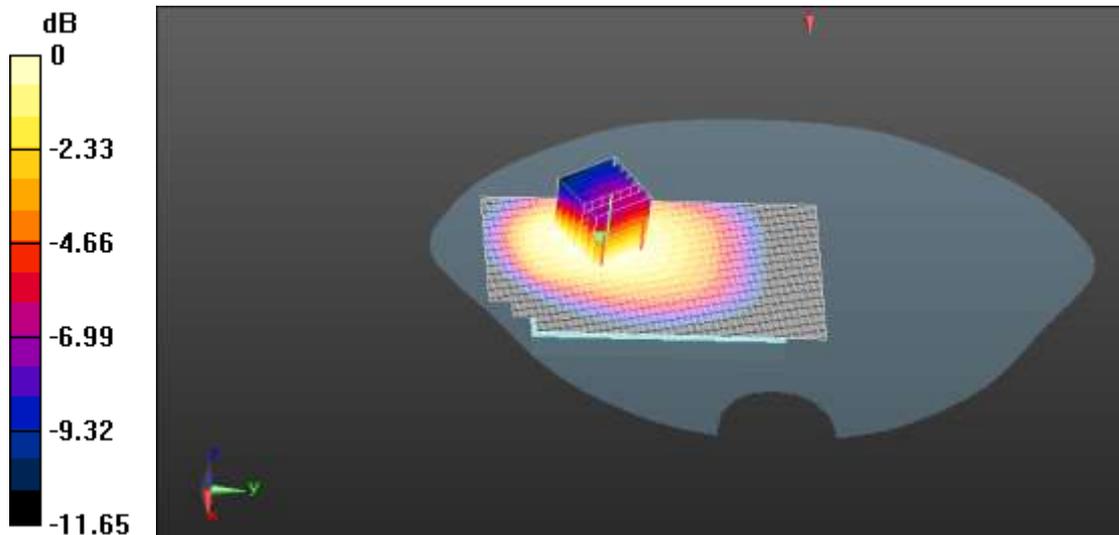
0 dB = 1.010mW/g = 0.09 dB mW/g

GSM850 Towards ground low with GPRS

Date/Time: 2012-5-16 16:02:24

Communication System: Generic GSM; Communication System Band: GSM 850 (824.0 - 849.0 MHz); Frequency: 824.2 MHz; Communication System PAR: 9.191 dB

Medium parameters used (interpolated): f = 824.2 MHz; σ = 0.933 mho/m; ε_r = 54.311; ρ = 1000 kg/m^3

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE-1528/OET65C)

DASY5 Configuration:

- Probe: ES3DV3 - SN3241; ConvF(6.19, 6.19, 6.19);
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1226; Calibrated: 2011-6-13
- Phantom: SAM1; Type: SAM; Serial: TP1576
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.4 (4989)

body/Towards ground - low with GPRS/Area Scan (91x151x1):

Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 1.226 mW/g

**body/Towards ground - low with GPRS/Zoom Scan (7x7x7)/Cube 0:**

Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 6.932 V/m; Power Drift = 0.18 dB

Peak SAR (extrapolated) = 1.5190

SAR(1 g) = 1.16 mW/g; SAR(10 g) = 0.845 mW/g

Maximum value of SAR (measured) = 1.217 mW/g

body/Towards ground - low with GPRS/Zoom Scan (7x7x7)/Cube 1:

Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 6.932 V/m; Power Drift = 0.18 dB

Peak SAR (extrapolated) = 1.6300

SAR(1 g) = 1.07 mW/g; SAR(10 g) = 0.702 mW/g

Maximum value of SAR (measured) = 1.187 mW/g
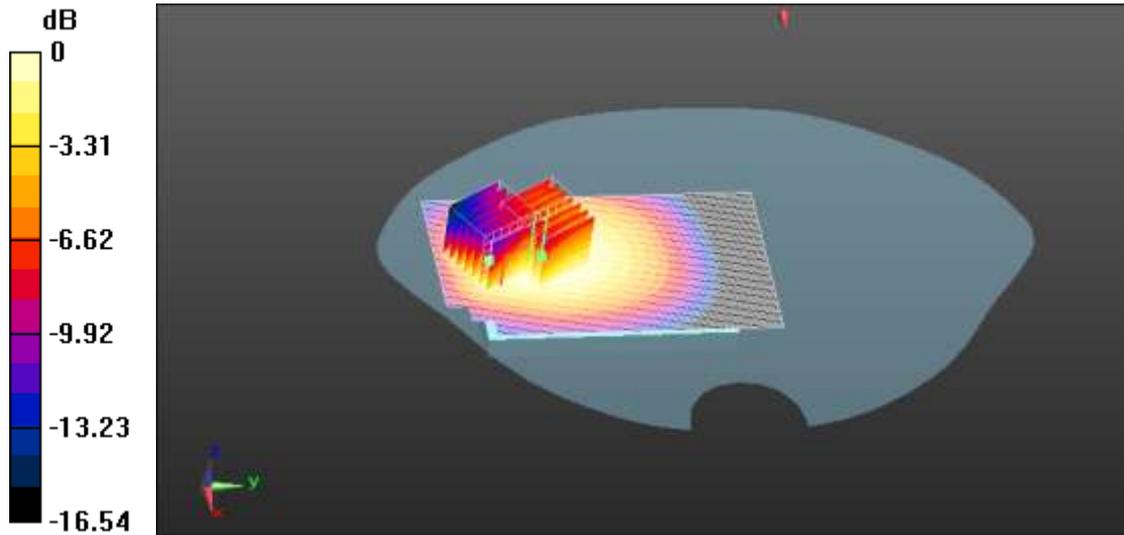
0 dB = 1.190mW/g = 1.51 dB mW/g
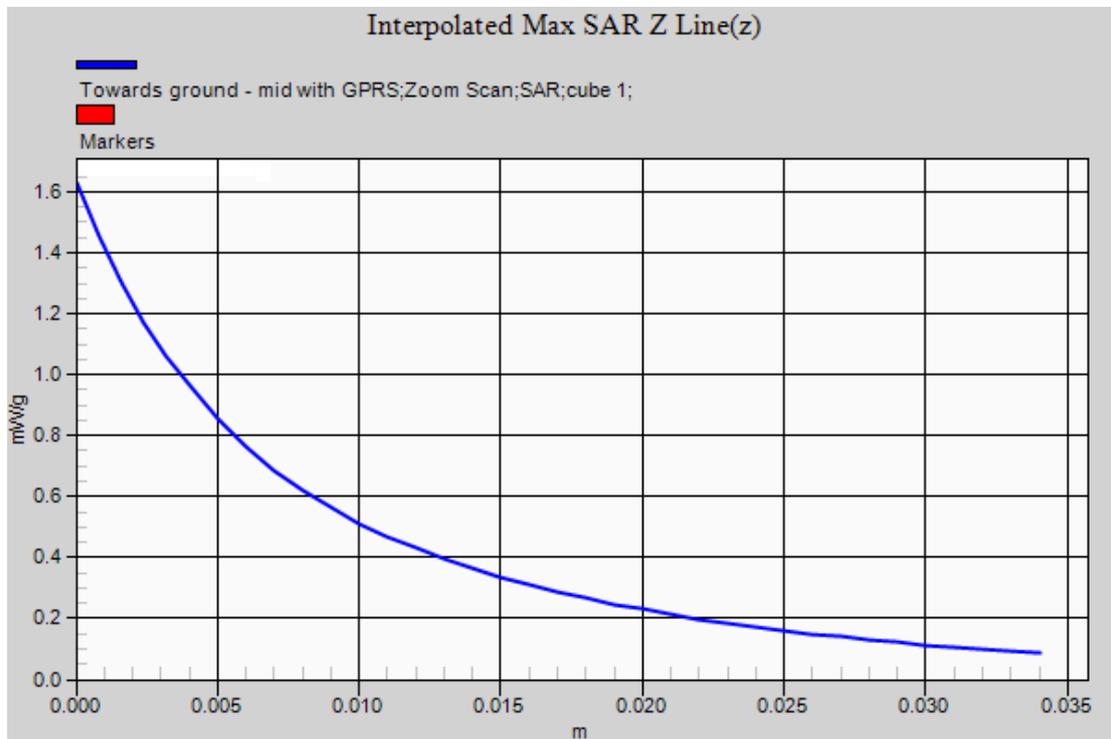
GSM850 Towards ground high with GPRS

Date/Time: 2012-5-16 17:16:58

Communication System: Generic GSM; Communication System Band: GSM 850 (824.0 - 849.0 MHz); Frequency: 848.6 MHz; Communication System PAR: 9.191 dB

Medium parameters used: f = 849 MHz; σ = 0.967 mho/m; ε_r = 54.15; ρ = 1000 kg/m^3

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE-1528/OET65C)

DASY5 Configuration:

- Probe: ES3DV3 - SN3241; ConvF(6.19, 6.19, 6.19);
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1226; Calibrated: 2011-6-13
- Phantom: SAM1; Type: SAM; Serial: TP1576
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.4 (4989)

body/Towards ground - high with GPRS/Area Scan (91x151x1):

Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 1.079 mW/g

### body/Towards ground - high with GPRS/Zoom Scan (7x7x7)/Cube 0:

Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 6.818 V/m; Power Drift = -0.07 dB

Peak SAR (extrapolated) = 1.3470

SAR(1 g) = 1.02 mW/g; SAR(10 g) = 0.739 mW/g

Maximum value of SAR (measured) = 1.077 mW/g
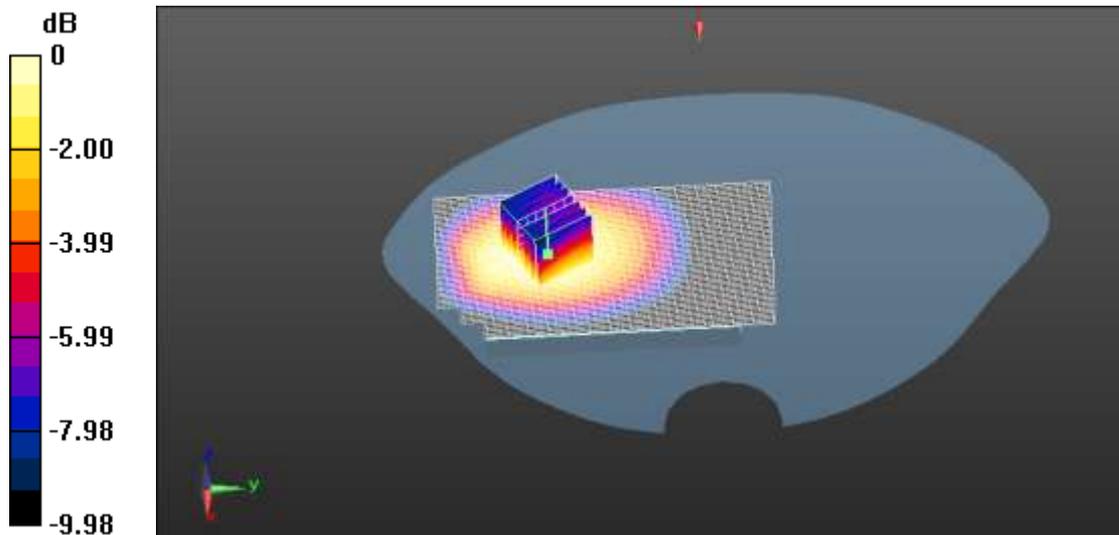
0 dB = 1.080mW/g = 0.67 dB mW/g

GSM850 Towards ground low with EDGE

Date/Time: 2012-5-17 10:19:56

Communication System: Generic GSM; Communication System Band: GSM 850
(824.0 - 849.0 MHz); Frequency: 824.2 MHz; Communication System PAR: 9.191 dB

Medium parameters used (interpolated): f = 824.2 MHz; σ = 0.933 mho/m; ε_r = 54.311;
ρ = 1000 kg/m^3

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE-1528/OET65C)

DASY5 Configuration:

- Probe: ES3DV3 - SN3241; ConvF(6.19, 6.19, 6.19);
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1226; Calibrated: 2011-6-13
- Phantom: SAM1; Type: SAM; Serial: TP1576
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.4 (4989)

body/Towards ground - low with EDGE/Area Scan (91x151x1):

Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 1.208 mW/g

**body/Towards ground - low with EDGE/Zoom Scan (7x7x7)/Cube 0:**

Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 11.670 V/m; Power Drift = -0.10 dB

Peak SAR (extrapolated) = 1.5160

SAR(1 g) = 1.14 mW/g; SAR(10 g) = 0.817 mW/g

Maximum value of SAR (measured) = 1.199 mW/g

body/Towards ground - low with EDGE/Zoom Scan (7x7x7)/Cube 1:

Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 11.670 V/m; Power Drift = -0.10 dB

Peak SAR (extrapolated) = 1.6410

SAR(1 g) = 1.05 mW/g; SAR(10 g) = 0.694 mW/g

Maximum value of SAR (measured) = 1.153 mW/g
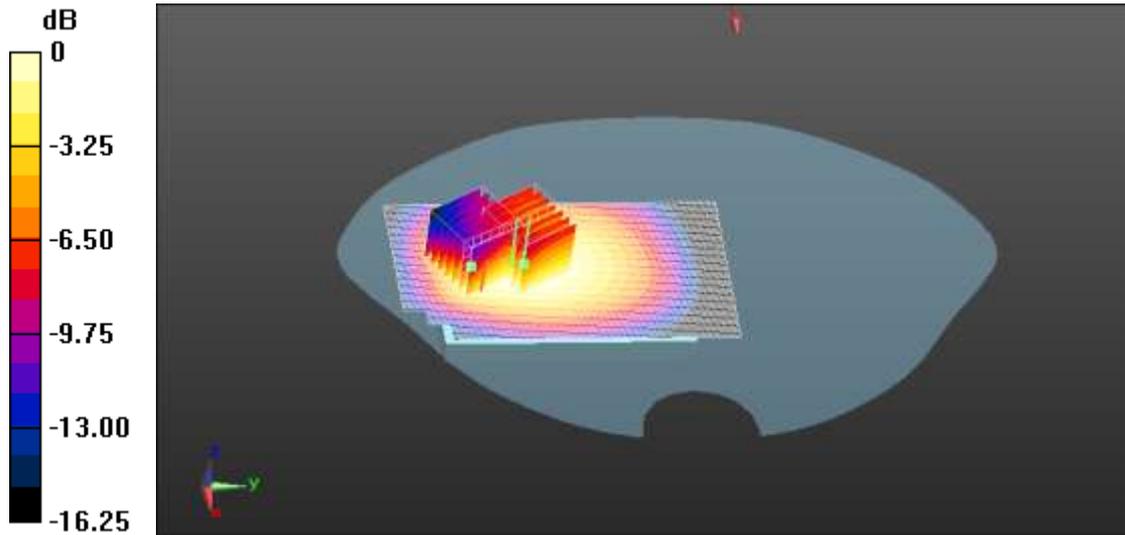
0 dB = 1.150mW/g = 1.21 dB mW/g

GSM1900 left Touch mid

Date/Time: 2012/4/19 11:31:02

Communication System: Generic GSM; Communication System Band: PCS 1900 (1850.0 - 1910.0 MHz); Frequency: 1880 MHz; Communication System PAR: 9.191 dB

Medium parameters used: f = 1880 MHz; σ = 1.364 mho/m; ε_r = 39.144; ρ = 1000 kg/m^3

Phantom section: Left Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: ES3DV3 - SN3241; ConvF(5.09, 5.09, 5.09);
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1226; Calibrated: 2011/6/13
- Phantom: SAM2; Type: SAM; Serial: TP-1575
- Measurement SW: DASY52, Version 52.2 (0); SEMCAD X Version 14.6.4 (4989)

left/Touch Position - mid/Area Scan (91x151x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.866 mW/g

left/Touch Position - mid/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 9.844 V/m; Power Drift = -0.13 dB

Peak SAR (extrapolated) = 1.2880

SAR(1 g) = 0.791 mW/g; SAR(10 g) = 0.437 mW/g

Maximum value of SAR (measured) = 0.868 mW/g
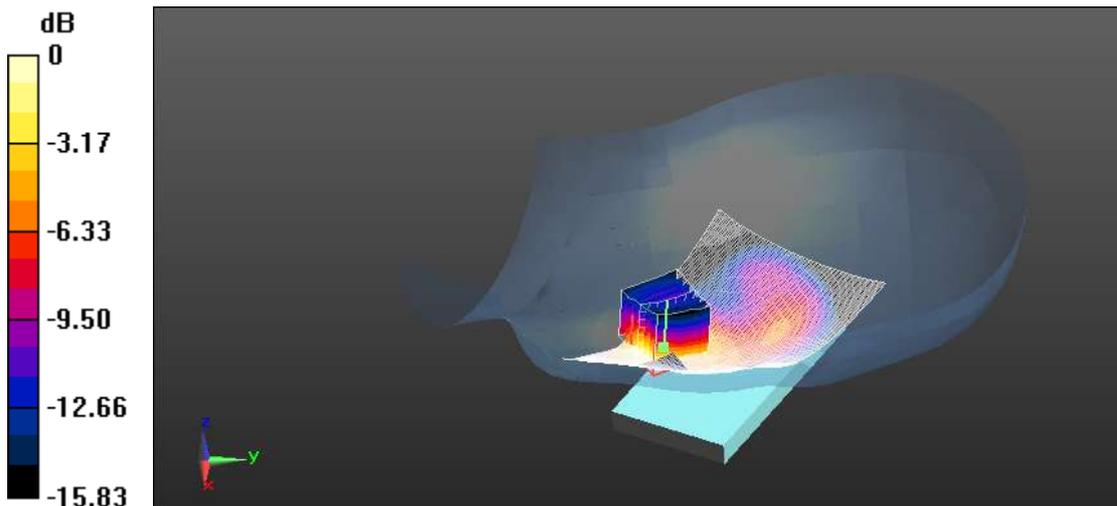
0 dB = 0.870mW/g = -1.21 dB mW/g

GSM1900 left Tilt mid

Date/Time: 2012/4/19 12:02:39

Communication System: Generic GSM; Communication System Band: PCS 1900 (1850.0 - 1910.0 MHz); Frequency: 1880 MHz; Communication System PAR: 9.191 dB

Medium parameters used: f = 1880 MHz; σ = 1.364 mho/m; ε_r = 39.144; ρ = 1000 kg/m^3

Phantom section: Left Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: ES3DV3 - SN3241; ConvF(5.09, 5.09, 5.09);
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1226; Calibrated: 2011/6/13
- Phantom: SAM2; Type: SAM; Serial: TP-1575
- Measurement SW: DASY52, Version 52.2 (0); SEMCAD X Version 14.6.4 (4989)

left/Tilt Position - mid/Area Scan (91x151x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.247 mW/g

**left/Tilt Position - mid/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 12.959 V/m; Power Drift = -0.02 dB

Peak SAR (extrapolated) = 0.3530

SAR(1 g) = 0.220 mW/g; SAR(10 g) = 0.133 mW/g

Maximum value of SAR (measured) = 0.240 mW/g
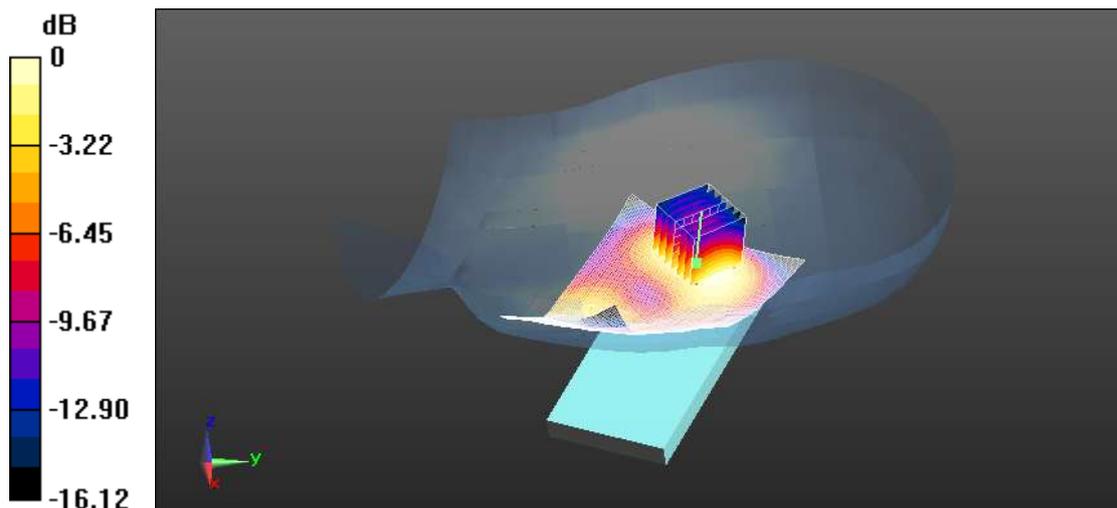
0 dB = 0.240mW/g = -12.40 dB mW/g

GSM1900 right Touch mid

Date/Time: 2012/4/19 12:36:17

Communication System: Generic GSM; Communication System Band: PCS 1900 (1850.0 - 1910.0 MHz); Frequency: 1880 MHz; Communication System PAR: 9.191 dB

Medium parameters used: f = 1880 MHz; σ = 1.364 mho/m; ε_r = 39.144; ρ = 1000 kg/m^3

Phantom section: Right Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: ES3DV3 - SN3241; ConvF(5.09, 5.09, 5.09);
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1226; Calibrated: 2011/6/13
- Phantom: SAM2; Type: SAM; Serial: TP-1575
- Measurement SW: DASY52, Version 52.2 (0); SEMCAD X Version 14.6.4 (4989)

right/Touch Position - mid/Area Scan (91x151x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.443 mW/g

right/Touch Position - mid/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 9.442 V/m; Power Drift = 0.15 dB

Peak SAR (extrapolated) = 0.5900

SAR(1 g) = 0.395 mW/g; SAR(10 g) = 0.252 mW/g

Maximum value of SAR (measured) = 0.425 mW/g

right/Touch Position - mid/Zoom Scan (7x7x7)/Cube 1: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 9.442 V/m; Power Drift = 0.15 dB

Peak SAR (extrapolated) = 0.5180

SAR(1 g) = 0.363 mW/g; SAR(10 g) = 0.232 mW/g

Maximum value of SAR (measured) = 0.402 mW/g
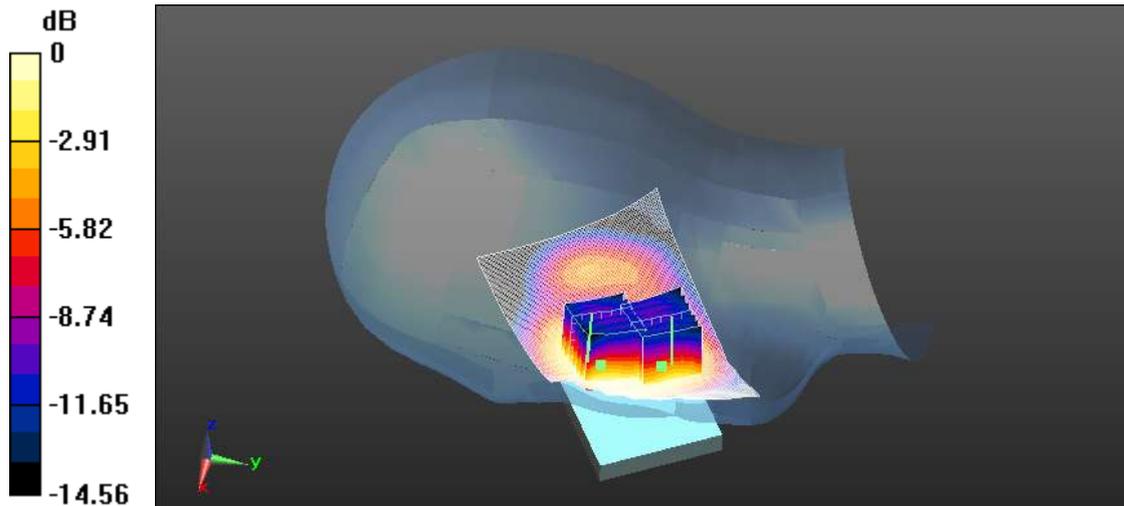
0 dB = 0.400mW/g = -7.96 dB mW/g

GSM1900 right Tilt mid

Date/Time: 2012/4/19 13:19:56

Communication System: Generic GSM; Communication System Band: PCS 1900 (1850.0 - 1910.0 MHz); Frequency: 1880 MHz; Communication System PAR: 9.191 dB

Medium parameters used: f = 1880 MHz; σ = 1.364 mho/m; ε_r = 39.144; ρ = 1000 kg/m^3

Phantom section: Right Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: ES3DV3 - SN3241; ConvF(5.09, 5.09, 5.09);
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1226; Calibrated: 2011/6/13
- Phantom: SAM2; Type: SAM; Serial: TP-1575
- Measurement SW: DASY52, Version 52.2 (0); SEMCAD X Version 14.6.4 (4989)

right/Tilt Position - mid/Area Scan (91x151x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.242 mW/g

right/Tilt Position - mid/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 11.687 V/m; Power Drift = -0.07 dB

Peak SAR (extrapolated) = 0.3600

SAR(1 g) = 0.219 mW/g; SAR(10 g) = 0.125 mW/g

Maximum value of SAR (measured) = 0.245 mW/g
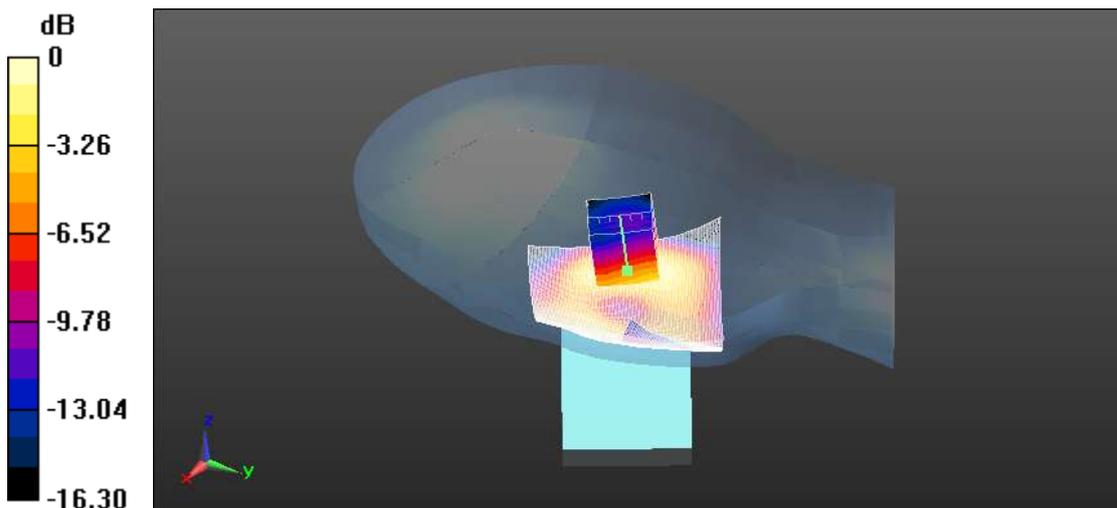
0 dB = 0.240mW/g = -12.40 dB mW/g

GSM1900 left Touch low

Date/Time: 2012/4/19 13:51:03

Communication System: Generic GSM; Communication System Band: PCS 1900 (1850.0 - 1910.0 MHz); Frequency: 1850.2 MHz; Communication System PAR: 9.191 dB

Medium parameters used (interpolated): f = 1850.2 MHz; σ = 1.339 mho/m; ε_r = 39.255; ρ = 1000 kg/m^3

Phantom section: Left Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: ES3DV3 - SN3241; ConvF(5.09, 5.09, 5.09);
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1226; Calibrated: 2011/6/13
- Phantom: SAM2; Type: SAM; Serial: TP-1575
- Measurement SW: DASY52, Version 52.2 (0); SEMCAD X Version 14.6.4 (4989)

left/Touch Position -low/Area Scan (91x151x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.736 mW/g

**left/Touch Position -low/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 8.746 V/m; Power Drift = -0.13 dB

Peak SAR (extrapolated) = 1.0930

SAR(1 g) = 0.662 mW/g; SAR(10 g) = 0.362 mW/g

Maximum value of SAR (measured) = 0.727 mW/g
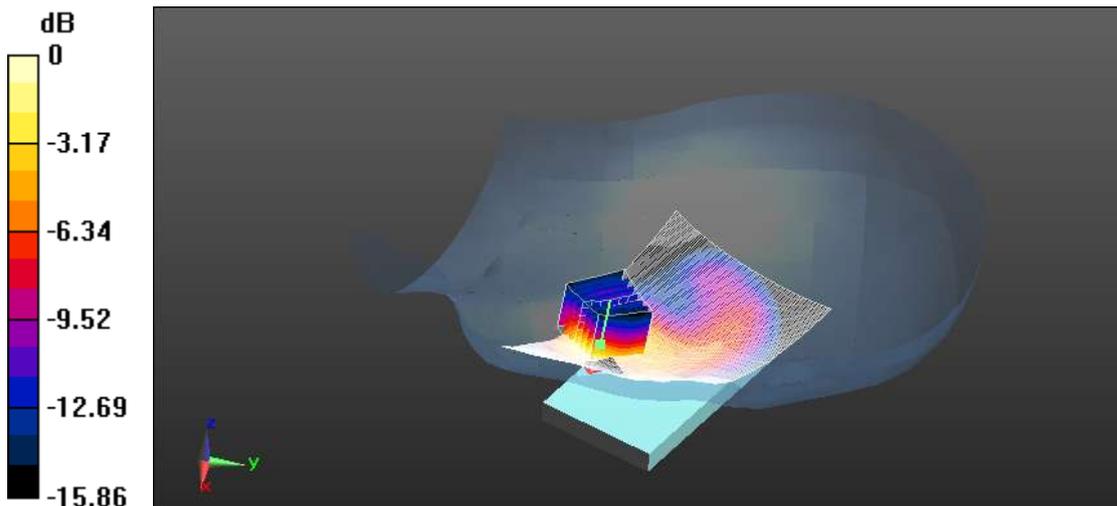
0 dB = 0.730mW/g = -2.73 dB mW/g

GSM1900 left Touch high

Date/Time: 2012/4/19 14:30:40

Communication System: Generic GSM; Communication System Band: PCS 1900 (1850.0 - 1910.0 MHz); Frequency: 1909.8 MHz; Communication System PAR: 9.191 dB

Medium parameters used: f = 1910 MHz; σ = 1.393 mho/m; ε_r = 39.011; ρ = 1000 kg/m^3

Phantom section: Left Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: ES3DV3 - SN3241; ConvF(5.09, 5.09, 5.09);
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1226; Calibrated: 2011/6/13
- Phantom: SAM2; Type: SAM; Serial: TP-1575
- Measurement SW: DASY52, Version 52.2 (0); SEMCAD X Version 14.6.4 (4989)

left/Touch Position - high/Area Scan (91x151x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 1.169 mW/g

**left/Touch Position - high/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 11.965 V/m; Power Drift = -0.06 dB

Peak SAR (extrapolated) = 1.7490

SAR(1 g) = 1.05 mW/g; SAR(10 g) = 0.579 mW/g

Maximum value of SAR (measured) = 1.164 mW/g

0 dB = 1.160mW/g = 1.29 dB mW/g

Interpolated Max SAR Z Line(z)

Touch Position - high;Zoom Scan;SAR;cube 0 — Markers
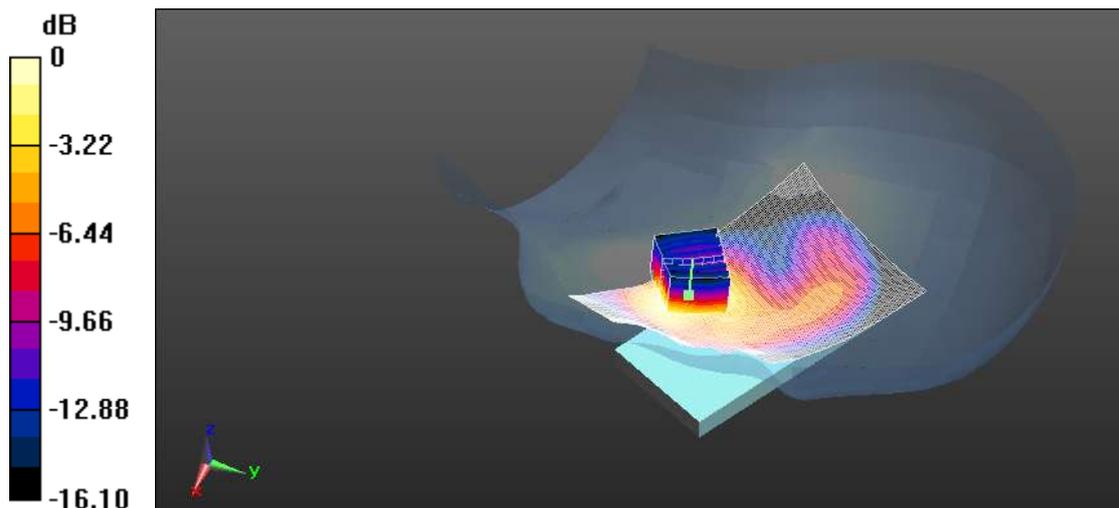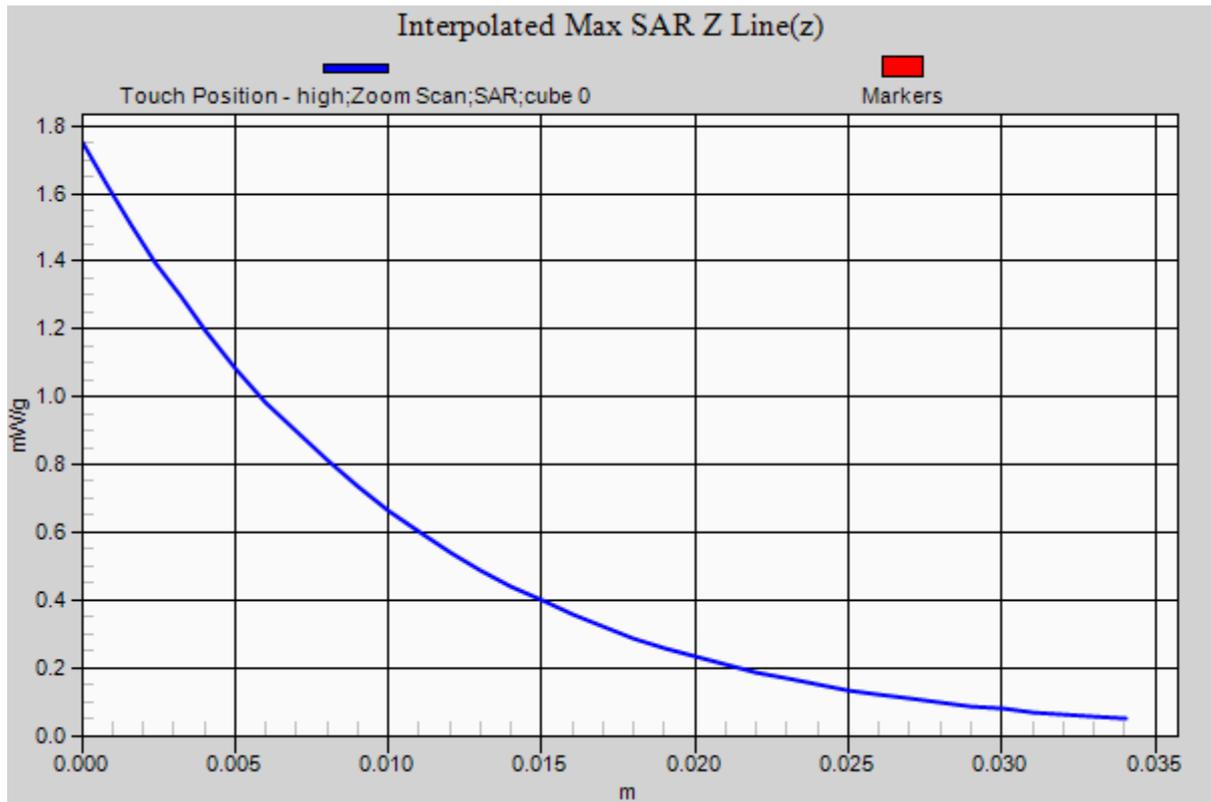
GSM1900 Towards phantom mid

Date/Time: 2012/4/22 9:45:39

Communication System: Generic GSM; Communication System Band: PCS 1900 (1850.0 - 1910.0 MHz); Frequency: 1880 MHz; Communication System PAR: 9.191 dB

Medium parameters used (extrapolated): f = 1880 MHz; σ = 1.454 mho/m; ε_r = 52.526; ρ = 1000 kg/m^3

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: ES3DV3 - SN3241; ConvF(4.67, 4.67, 4.67);
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1226; Calibrated: 2011/6/13
- Phantom: SAM2; Type: SAM; Serial: TP-1575
- Measurement SW: DASY52, Version 52.2 (0); SEMCAD X Version 14.6.4 (4989)

body/Towards phantom - mid/Area Scan (91x151x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.716 mW/g

body/Towards phantom - mid/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 8.480 V/m; Power Drift = -0.03 dB

Peak SAR (extrapolated) = 1.1510

SAR(1 g) = 0.650 mW/g; SAR(10 g) = 0.368 mW/g

Maximum value of SAR (measured) = 0.717 mW/g
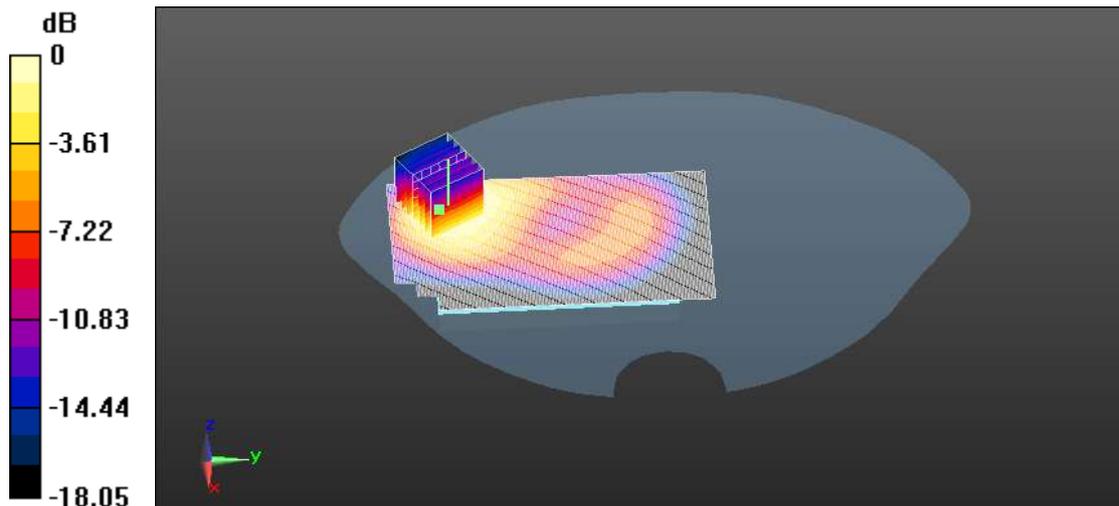
0 dB = 0.720mW/g = -2.85 dB mW/g

GSM1900 Towards ground mid

Date/Time: 2012/4/22 10:18:17

Communication System: Generic GSM; Communication System Band: PCS 1900 (1850.0 - 1910.0 MHz); Frequency: 1880 MHz; Communication System PAR: 9.191 dB

Medium parameters used (extrapolated): f = 1880 MHz; σ = 1.454 mho/m; ε_r = 52.526; ρ = 1000 kg/m^3

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: ES3DV3 - SN3241; ConvF(4.67, 4.67, 4.67);
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1226; Calibrated: 2011/6/13
- Phantom: SAM2; Type: SAM; Serial: TP-1575
- Measurement SW: DASY52, Version 52.2 (0); SEMCAD X Version 14.6.4 (4989)

body/Towards ground - mid/Area Scan (91x151x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.993 mW/g

body/Towards ground - mid/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 9.838 V/m; Power Drift = -0.10 dB

Peak SAR (extrapolated) = 1.5060

SAR(1 g) = 0.885 mW/g; SAR(10 g) = 0.524 mW/g

Maximum value of SAR (measured) = 0.973 mW/g
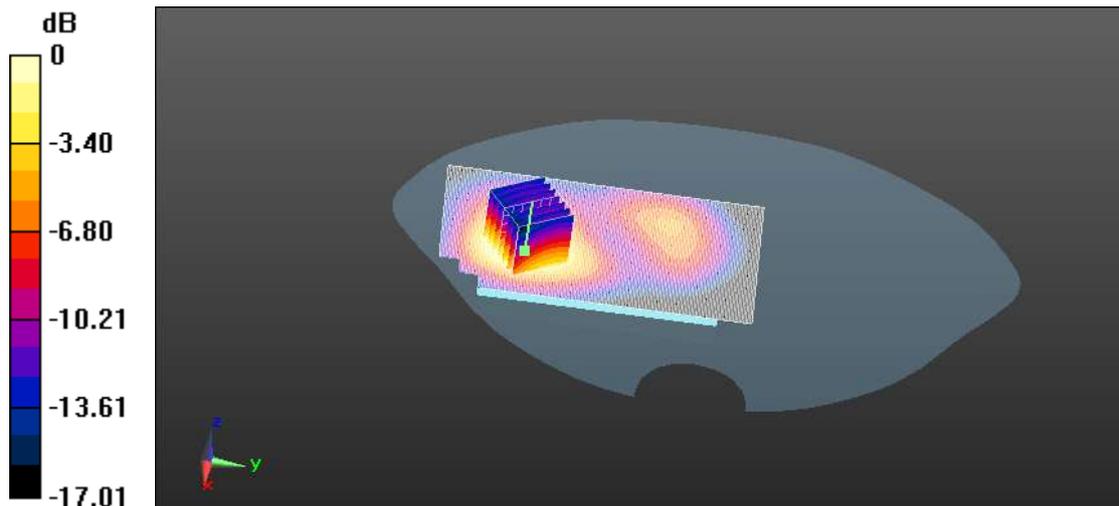
0 dB = 0.970mW/g = -0.26 dB mW/g

GSM1900 Towards ground low

Date/Time: 2012/4/22 11:07:19

Communication System: Generic GSM; Communication System Band: PCS 1900 (1850.0 - 1910.0 MHz); Frequency: 1850.2 MHz; Communication System PAR: 9.191 dB

Medium parameters used (extrapolated): f = 1850.2 MHz; σ = 1.43 mho/m; ε_r = 52.133; ρ = 1000 kg/m^3

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: ES3DV3 - SN3241; ConvF(4.67, 4.67, 4.67);
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1226; Calibrated: 2011/6/13
- Phantom: SAM2; Type: SAM; Serial: TP-1575
- Measurement SW: DASY52, Version 52.2 (0); SEMCAD X Version 14.6.4 (4989)

body/Towards ground -low/Area Scan (91x151x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.868 mW/g

body/Towards ground -low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 9.524 V/m; Power Drift = 0.11 dB

Peak SAR (extrapolated) = 1.2920

SAR(1 g) = 0.772 mW/g; SAR(10 g) = 0.456 mW/g

Maximum value of SAR (measured) = 0.858 mW/g
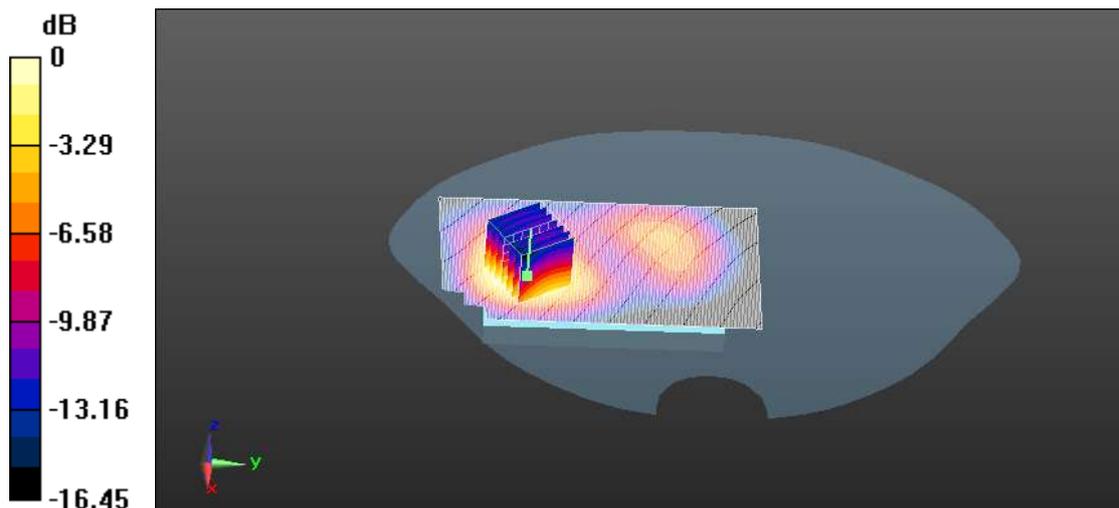
0 dB = 0.860mW/g = -1.31 dB mW/g

GSM1900 Towards ground high

Date/Time: 2012/4/22 11:38:39

Communication System: Generic GSM; Communication System Band: PCS 1900 (1850.0 - 1910.0 MHz); Frequency: 1909.8 MHz; Communication System PAR: 9.191 dB

Medium parameters used (interpolated): f = 1909.8 MHz; σ = 1.478 mho/m; ε_r = 52.919; ρ = 1000 kg/m^3

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: ES3DV3 - SN3241; ConvF(4.67, 4.67, 4.67);
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1226; Calibrated: 2011/6/13
- Phantom: SAM2; Type: SAM; Serial: TP-1575
- Measurement SW: DASY52, Version 52.2 (0); SEMCAD X Version 14.6.4 (4989)

body/Towards ground - high/Area Scan (91x151x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 1.024 mW/g

body/Towards ground - high/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 9.501 V/m; Power Drift = -0.02 dB

Peak SAR (extrapolated) = 1.5140

SAR(1 g) = 0.895 mW/g; SAR(10 g) = 0.531 mW/g

Maximum value of SAR (measured) = 0.979 mW/g
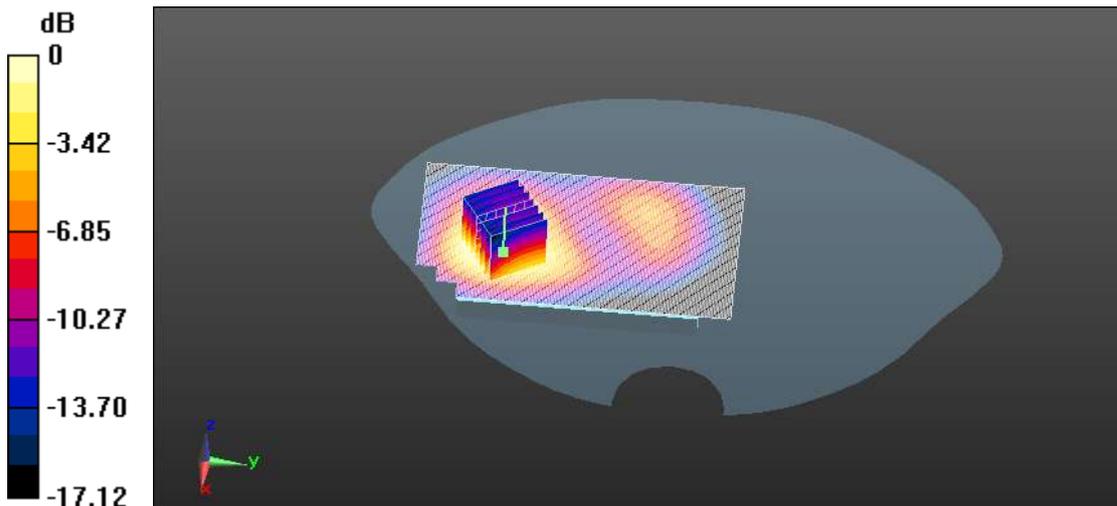
0 dB = 0.980mW/g = -0.18 dB mW/g

GSM1900 Towards ground high with earphone

Date/Time: 2012/4/22 14:53:38

Communication System: Generic GSM; Communication System Band: PCS 1900 (1850.0 - 1910.0 MHz); Frequency: 1909.8 MHz; Communication System PAR: 9.191 dB

Medium parameters used (interpolated): f = 1909.8 MHz; σ = 1.478 mho/m; ε_r = 52.919; ρ = 1000 kg/m^3

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: ES3DV3 - SN3241; ConvF(4.67, 4.67, 4.67);
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1226; Calibrated: 2011/6/13
- Phantom: SAM2; Type: SAM; Serial: TP-1575
- Measurement SW: DASY52, Version 52.2 (0); SEMCAD X Version 14.6.4 (4989)

body/Towards ground - high with earphone/Area Scan (91x151x1):

Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.986 mW/g

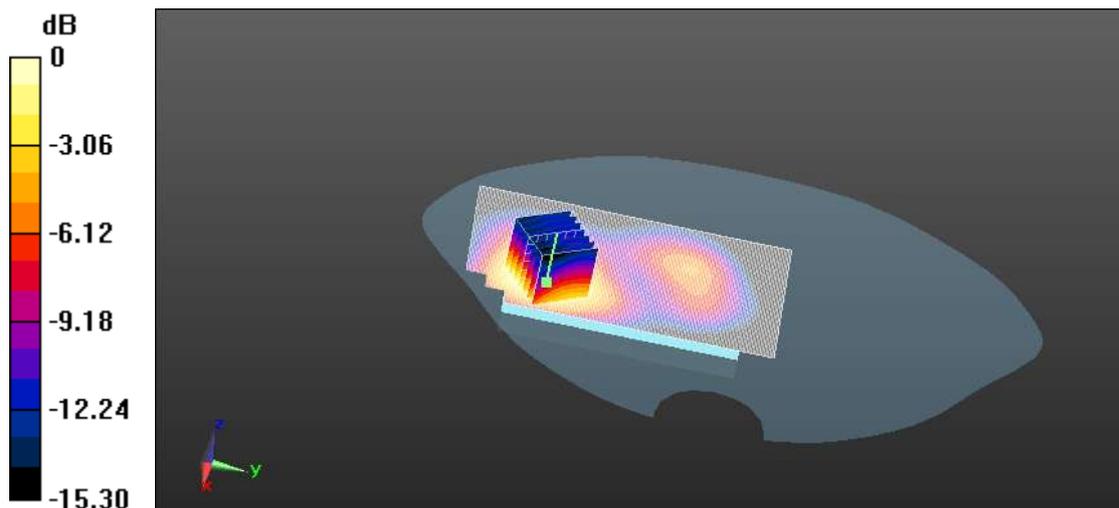**body/Towards ground - high with earphone/Zoom Scan (7x7x7)/Cube 0:**

Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 9.388 V/m; Power Drift = 0.01 dB

Peak SAR (extrapolated) = 1.4900

SAR(1 g) = 0.898 mW/g; SAR(10 g) = 0.537 mW/g

Maximum value of SAR (measured) = 0.979 mW/g

0 dB = 0.980mW/g = -0.18 dB mW/g

GSM1900 Towards phantom mid with GPRS

Date/Time: 2012-5-17 11:56:56

Communication System: Generic GSM; Communication System Band: PCS 1900 (1850.0 - 1910.0 MHz); Frequency: 1880 MHz; Communication System PAR: 9.191 dB

Medium parameters used: f = 1880 MHz; σ = 1.477 mho/m; ε_r = 52.425; ρ = 1000 kg/m^3

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE-1528/OET65C)

DASY5 Configuration:

- Probe: ES3DV3 – SN3241; ConvF(4.67, 4.67, 4.67);
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1327; Calibrated: 2012-4-11
- Phantom: SAM 1; Type: SAM; Serial: TP:1702
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.4 (4989)

body/Towards phantom - mid with GPRS/Area Scan (91x151x1):

Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.624 mW/g

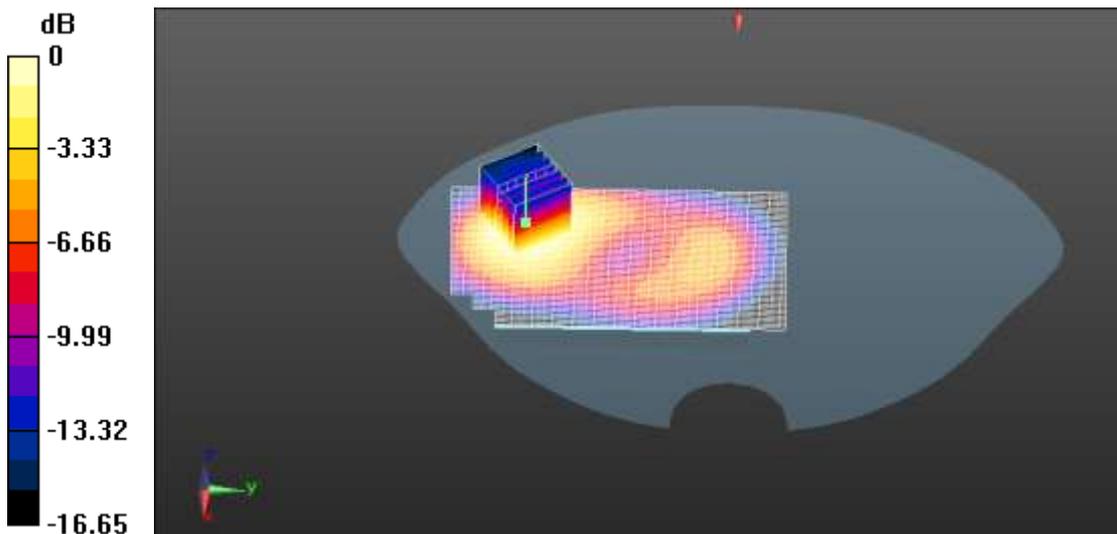**body/Towards phantom - mid with GPRS/Zoom Scan (7x7x7)/Cube 0:**

Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 10.709 V/m; Power Drift = -0.12 dB

Peak SAR (extrapolated) = 0.9560

SAR(1 g) = 0.549 mW/g; SAR(10 g) = 0.317 mW/g

Maximum value of SAR (measured) = 0.595 mW/g

0 dB = 0.590mW/g = -4.58 dB mW/g

GSM1900 Towards ground mid with GPRS

Date/Time: 2012-5-17 12:28:05

Communication System: Generic GSM; Communication System Band: PCS 1900 (1850.0 - 1910.0 MHz); Frequency: 1880 MHz; Communication System PAR: 9.191 dB

Medium parameters used: f = 1880 MHz; σ = 1.477 mho/m; ε_r = 52.425; ρ = 1000 kg/m^3

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE-1528/OET65C)

DASY5 Configuration:

- Probe: ES3DV3 - SN3241; ConvF(4.67, 4.67, 4.67);
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1327; Calibrated: 2012-4-11
- Phantom: SAM 1; Type: SAM; Serial: TP:1702
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.4 (4989)

body/Towards ground - mid with GPRS/Area Scan (91x151x1):

Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.749 mW/g

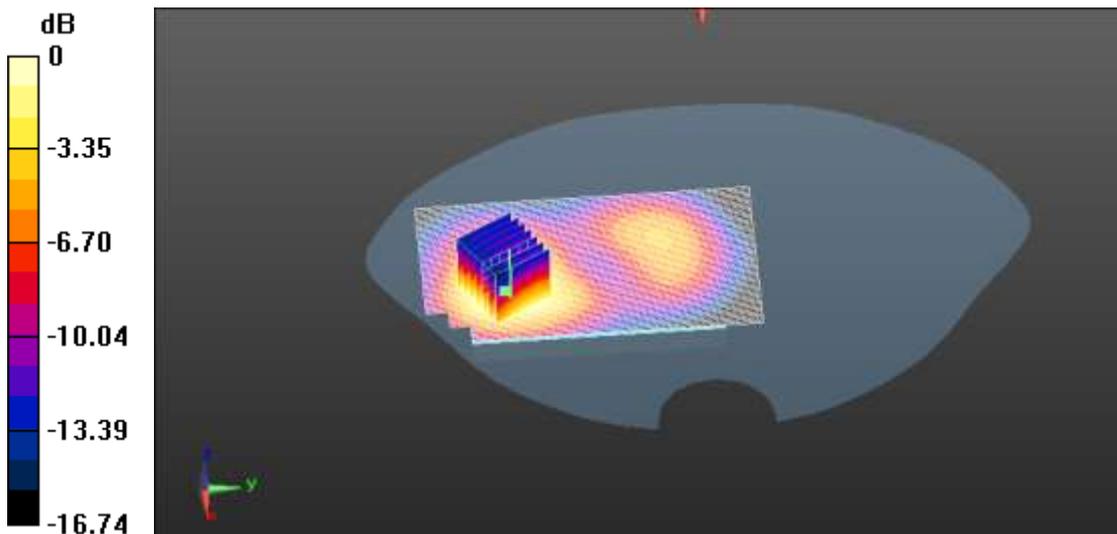### body/Towards ground - mid with GPRS/Zoom Scan (7x7x7)/Cube 0:

Measurement grid: dx=5mm, dy=5mm, dz=5mm

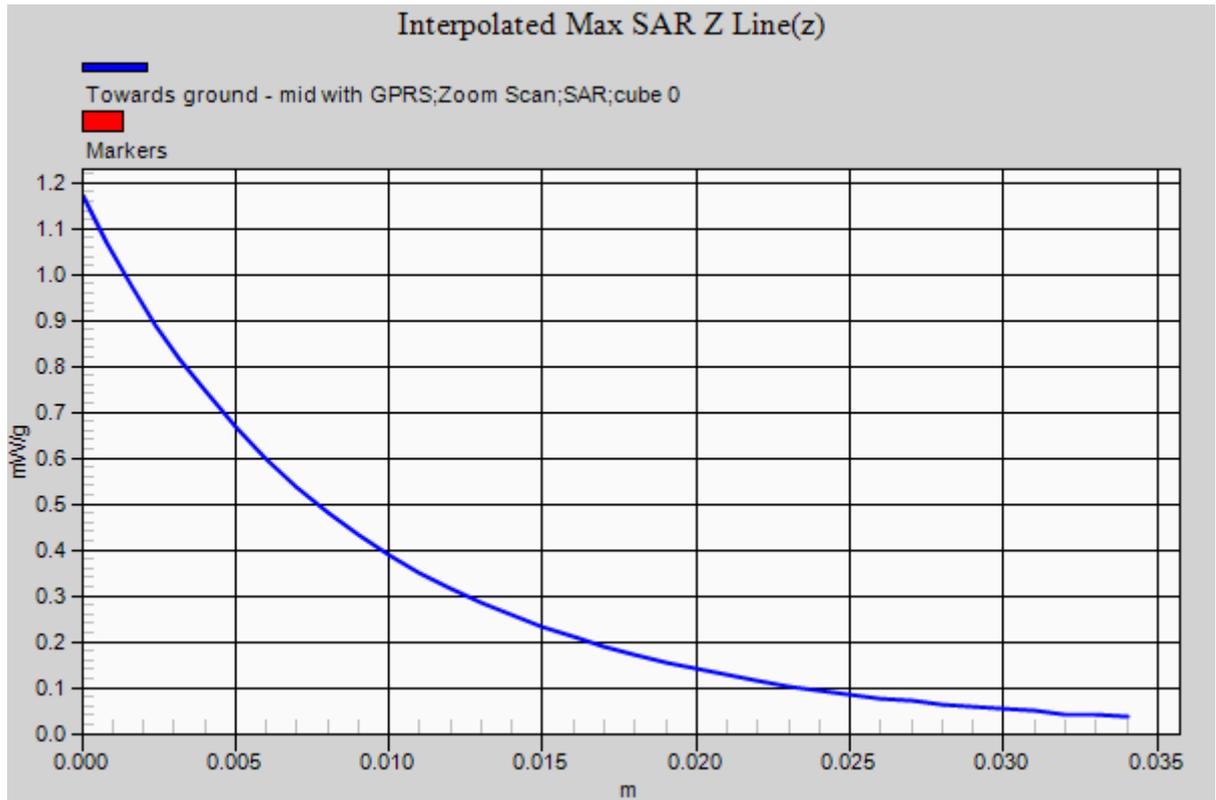Reference Value = 10.477 V/m; Power Drift = 0.0057 dB

Peak SAR (extrapolated) = 1.1730

SAR(1 g) = 0.691 mW/g; SAR(10 g) = 0.410 mW/g

Maximum value of SAR (measured) = 0.745 mW/g

0 dB = 0.740mW/g = -2.62 dB mW/g

Interpolated Max SAR Z Line(z)

GSM1900 front mid with GPRS

Date/Time: 2012-5-17 14:31:46

Communication System: Generic GSM; Communication System Band: PCS 1900 (1850.0 - 1910.0 MHz); Frequency: 1880 MHz; Communication System PAR: 9.191 dB

Medium parameters used: f = 1880 MHz; σ = 1.477 mho/m; ε_r = 52.425; ρ = 1000 kg/m^3

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE-1528/OET65C)

DASY5 Configuration:

- Probe: ES3DV3 - SN3241; ConvF(4.67, 4.67, 4.67);
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1327; Calibrated: 2012-4-11
- Phantom: SAM 1; Type: SAM; Serial: TP:1702
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.4 (4989)

body/front - mid with GPRS/Area Scan (61x101x1): Measurement grid: dx=10mm, dy=10mm

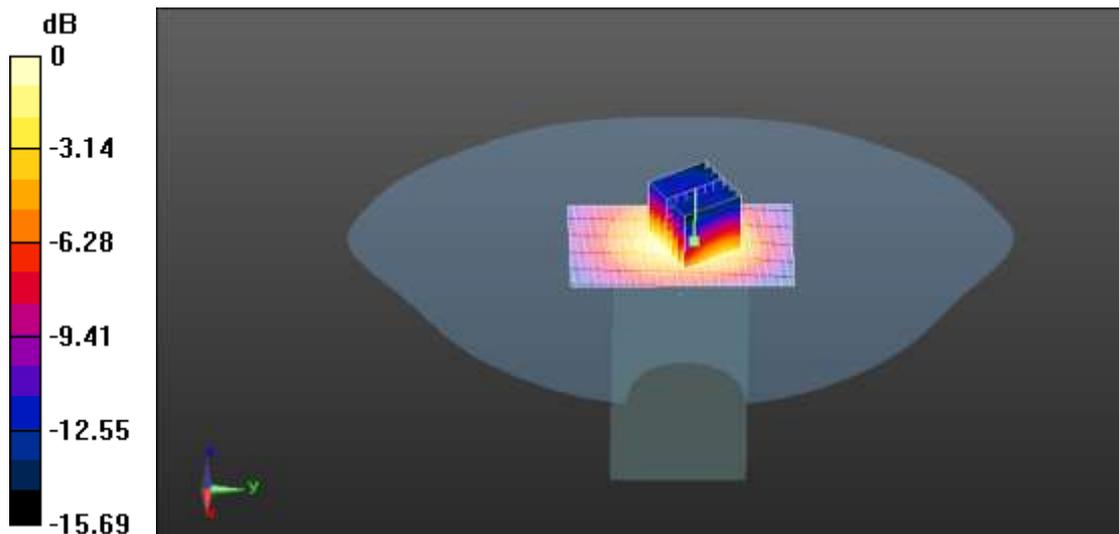Maximum value of SAR (interpolated) = 0.372 mW/g

body/front - mid with GPRS/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 13.716 V/m; Power Drift = 0.06 dB

Peak SAR (extrapolated) = 0.5570

SAR(1 g) = 0.331 mW/g; SAR(10 g) = 0.193 mW/g

Maximum value of SAR (measured) = 0.358 mW/g

0 dB = 0.360mW/g = -8.87 dB mW/g

GSM1900 left side mid with GPRS

Date/Time: 2012-5-17 13:03:48

Communication System: Generic GSM; Communication System Band: PCS 1900 (1850.0 - 1910.0 MHz); Frequency: 1880 MHz; Communication System PAR: 9.191 dB

Medium parameters used: f = 1880 MHz; σ = 1.477 mho/m; ϵ_r = 52.425; ρ = 1000 kg/m^3

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE-1528/OET65C)

DASY5 Configuration:

- Probe: ES3DV3 - SN3241; ConvF(4.67, 4.67, 4.67);
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1327; Calibrated: 2012-4-11
- Phantom: SAM 1; Type: SAM; Serial: TP:1702
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.4 (4989)

body2/left side - mid with GPRS/Area Scan (71x151x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.237 mW/g

body2/left side - mid with GPRS/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 5.684 V/m; Power Drift = -0.05 dB

Peak SAR (extrapolated) = 0.3640

SAR(1 g) = 0.218 mW/g; SAR(10 g) = 0.129 mW/g

Maximum value of SAR (measured) = 0.240 mW/g

body2/left side - mid with GPRS/Zoom Scan (7x7x7)/Cube 1: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 5.684 V/m; Power Drift = -0.05 dB

Peak SAR (extrapolated) = 0.3510

SAR(1 g) = 0.200 mW/g; SAR(10 g) = 0.115 mW/g

Maximum value of SAR (measured) = 0.221 mW/g
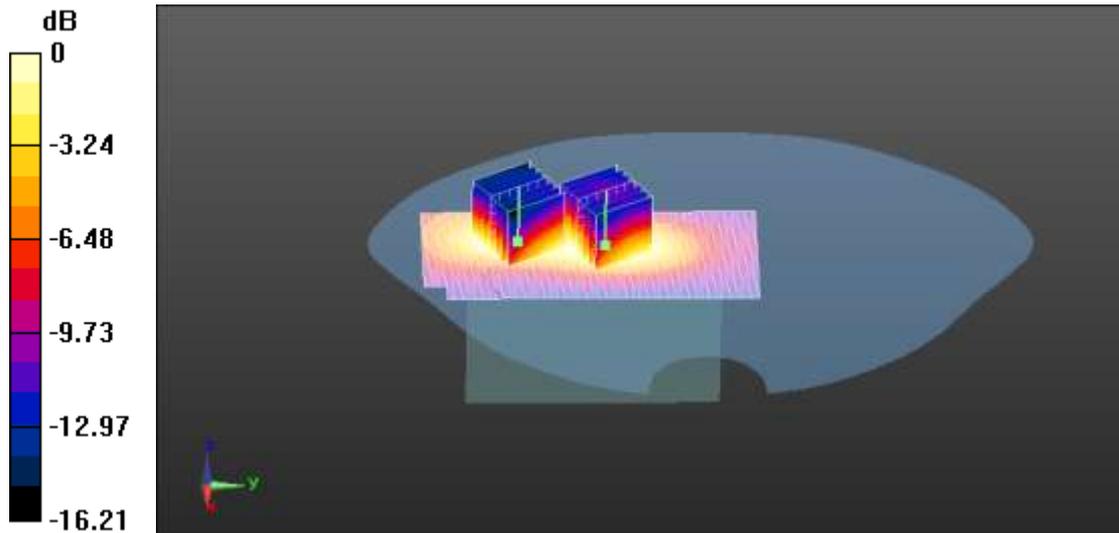
0 dB = 0.220mW/g = -13.15 dB mW/g

GSM1900 right side mid with GPRS

Date/Time: 2012-5-17 13:49:00

Communication System: Generic GSM; Communication System Band: PCS 1900 (1850.0 - 1910.0 MHz); Frequency: 1880 MHz; Communication System PAR: 9.191 dB

Medium parameters used: f = 1880 MHz; σ = 1.477 mho/m; ε_r = 52.425; ρ = 1000 kg/m^3

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE-1528/OET65C)

DASY5 Configuration:

- Probe: ES3DV3 - SN3241; ConvF(4.67, 4.67, 4.67);
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1327; Calibrated: 2012-4-11
- Phantom: SAM 1; Type: SAM; Serial: TP:1702
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.4 (4989)

body2/right side - mid with GPRS/Area Scan (71x151x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.157 mW/g

body2/right side - mid with GPRS/Zoom Scan (7x7x7)/Cube 0:

Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 4.821 V/m; Power Drift = 0.11 dB

Peak SAR (extrapolated) = 0.2360

SAR(1 g) = 0.141 mW/g; SAR(10 g) = 0.081 mW/g

Maximum value of SAR (measured) = 0.154 mW/g

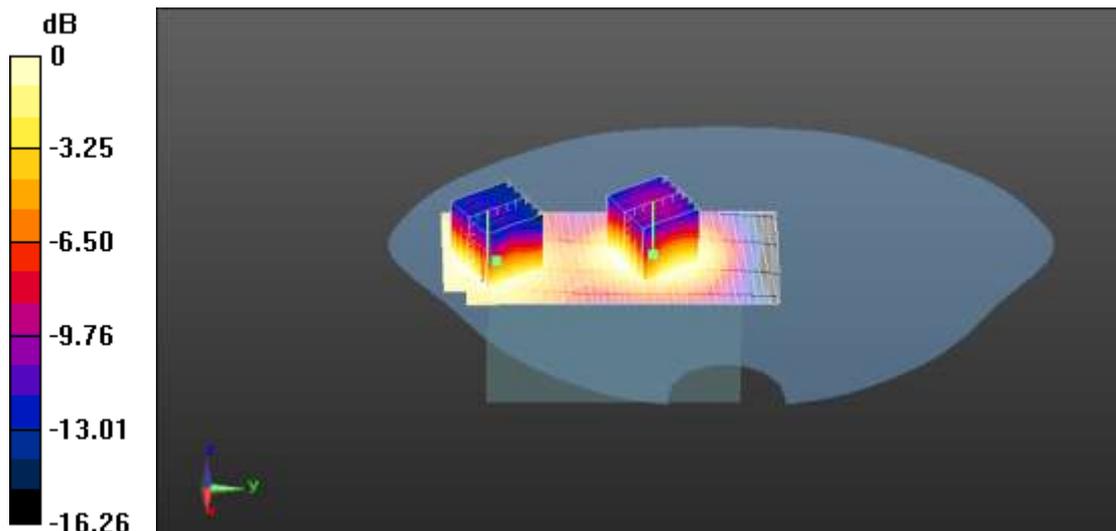**body2/right side - mid with GPRS/Zoom Scan (7x7x7)/Cube 1:**

Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 4.821 V/m; Power Drift = 0.11 dB

Peak SAR (extrapolated) = 0.1500

SAR(1 g) = 0.094 mW/g; SAR(10 g) = 0.058 mW/g

Maximum value of SAR (measured) = 0.101 mW/g

0 dB = 0.100mW/g = -20.00 dB mW/g

GSM1900 Towards ground low with GPRS

Date/Time: 2012-5-17 15:02:45

Communication System: Generic GSM; Communication System Band: PCS 1900 (1850.0 - 1910.0 MHz); Frequency: 1850.2 MHz; Communication System PAR: 9.191 dB

Medium parameters used (interpolated): f = 1850.2 MHz; σ = 1.448 mho/m; ε_r = 52.486; ρ = 1000 kg/m^3

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE-1528/OET65C)

DASY5 Configuration:

- Probe: ES3DV3 - SN3241; ConvF(4.67, 4.67, 4.67);
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1327; Calibrated: 2012-4-11
- Phantom: SAM 1; Type: SAM; Serial: TP:1702
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.4 (4989)

body/Towards ground - low with GPRS/Area Scan (91x151x1):

Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.744 mW/g

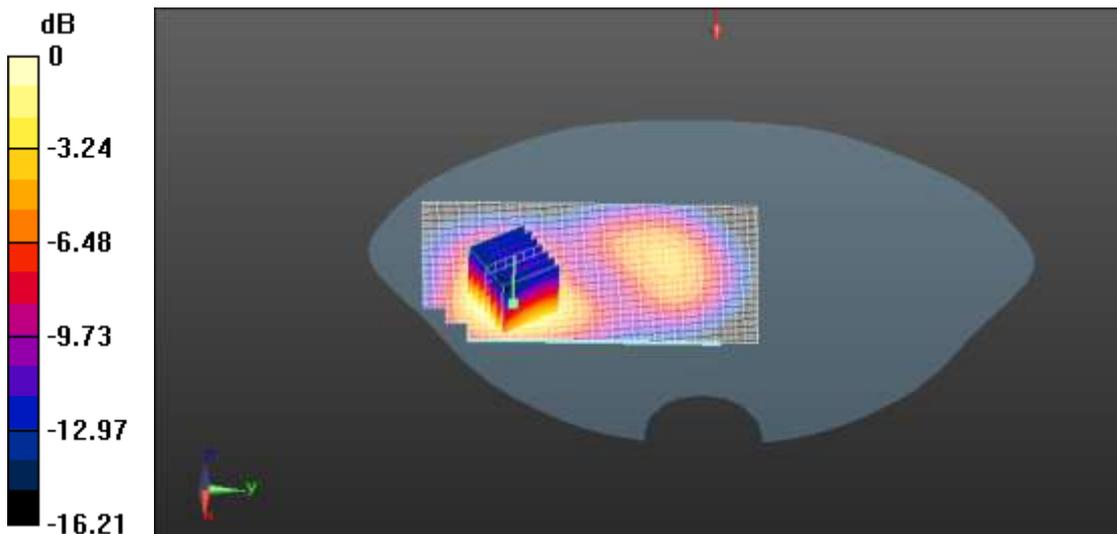**body/Towards ground - low with GPRS/Zoom Scan (7x7x7)/Cube 0:**

Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 11.596 V/m; Power Drift = -0.14 dB

Peak SAR (extrapolated) = 1.1310

SAR(1 g) = 0.665 mW/g; SAR(10 g) = 0.389 mW/g

Maximum value of SAR (measured) = 0.735 mW/g

0 dB = 0.740mW/g = -2.62 dB mW/g

GSM1900 Towards ground high with GPRS

Date/Time: 2012-5-17 15:33:59

Communication System: Generic GSM; Communication System Band: PCS 1900 (1850.0 - 1910.0 MHz); Frequency: 1909.8 MHz; Communication System PAR: 9.191 dB

Medium parameters used: f = 1910 MHz; σ = 1.503 mho/m; ε_r = 52.325; ρ = 1000 kg/m^3

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE-1528/OET65C)

DASY5 Configuration:

- Probe: ES3DV3 - SN3241; ConvF(4.67, 4.67, 4.67);
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1327; Calibrated: 2012-4-11
- Phantom: SAM 1; Type: SAM; Serial: TP:1702
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.4 (4989)

body/Towards ground - high with GPRS/Area Scan (91x151x1):

Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.768 mW/g

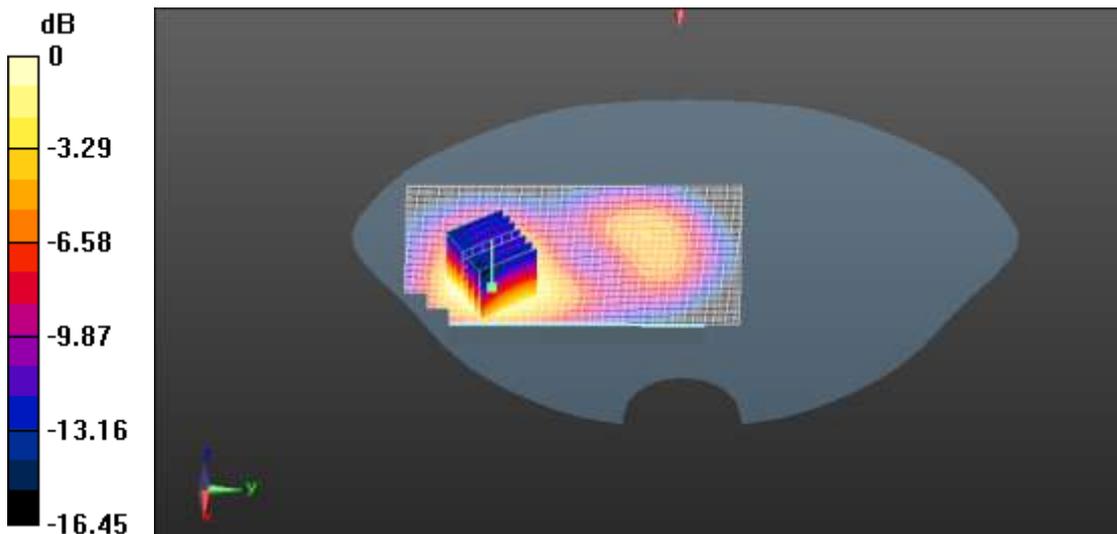**body/Towards ground - high with GPRS/Zoom Scan (7x7x7)/Cube 0:**

Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 10.645 V/m; Power Drift = 0.09 dB

Peak SAR (extrapolated) = 1.1650

SAR(1 g) = 0.686 mW/g; SAR(10 g) = 0.412 mW/g

Maximum value of SAR (measured) = 0.740 mW/g

0 dB = 0.740mW/g = -2.62 dB mW/g

GSM1900 Towards ground mid with EDGE

Date/Time: 2012-5-17 16:06:35

Communication System: Generic GSM; Communication System Band: PCS 1900 (1850.0 - 1910.0 MHz); Frequency: 1880 MHz; Communication System PAR: 9.191 dB

Medium parameters used: f = 1880 MHz; σ = 1.477 mho/m; ε_r = 52.425; ρ = 1000 kg/m^3

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE-1528/OET65C)

DASY5 Configuration:

- Probe: ES3DV3 - SN3241; ConvF(4.67, 4.67, 4.67);
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1327; Calibrated: 2012-4-11
- Phantom: SAM 1; Type: SAM; Serial: TP:1702
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.4 (4989)

body/Towards ground - mid with EDGE/Area Scan (91x151x1):

Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.753 mW/g

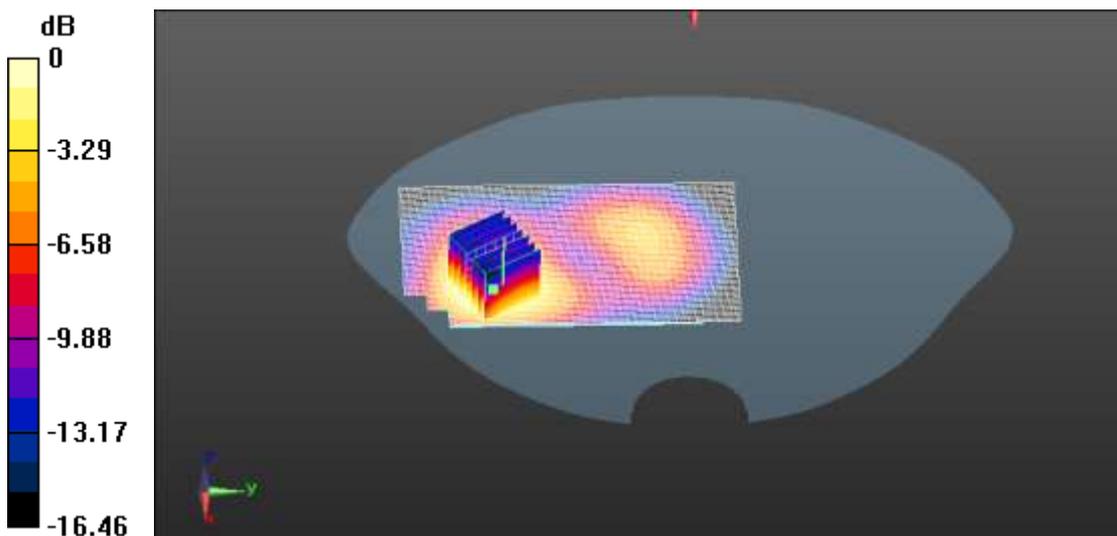**body/Towards ground - mid with EDGE/Zoom Scan (7x7x7)/Cube 0:**

Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 11.244 V/m; Power Drift = -0.07 dB

Peak SAR (extrapolated) = 1.1360

SAR(1 g) = 0.672 mW/g; SAR(10 g) = 0.400 mW/g

Maximum value of SAR (measured) = 0.718 mW/g

0 dB = 0.720mW/g = -2.85 dB mW/g

WCDMA BAND II left Touch mid

Date/Time: 2012/4/19 16:49:48

Communication System: WCDMA; Communication System Band: BAND 2;

Frequency: 1880 MHz; Communication System PAR: 0 dB

Medium parameters used: f = 1880 MHz; σ = 1.364 mho/m; ε_r = 39.144; ρ = 1000 kg/m^3

Phantom section: Left Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: ES3DV3 - SN3241; ConvF(5.09, 5.09, 5.09);
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1226; Calibrated: 2011/6/13
- Phantom: SAM2; Type: SAM; Serial: TP-1575
- Measurement SW: DASY52, Version 52.2 (0); SEMCAD X Version 14.6.4 (4989)

left/Touch Position - mid/Area Scan (91x151x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 1.245 mW/g

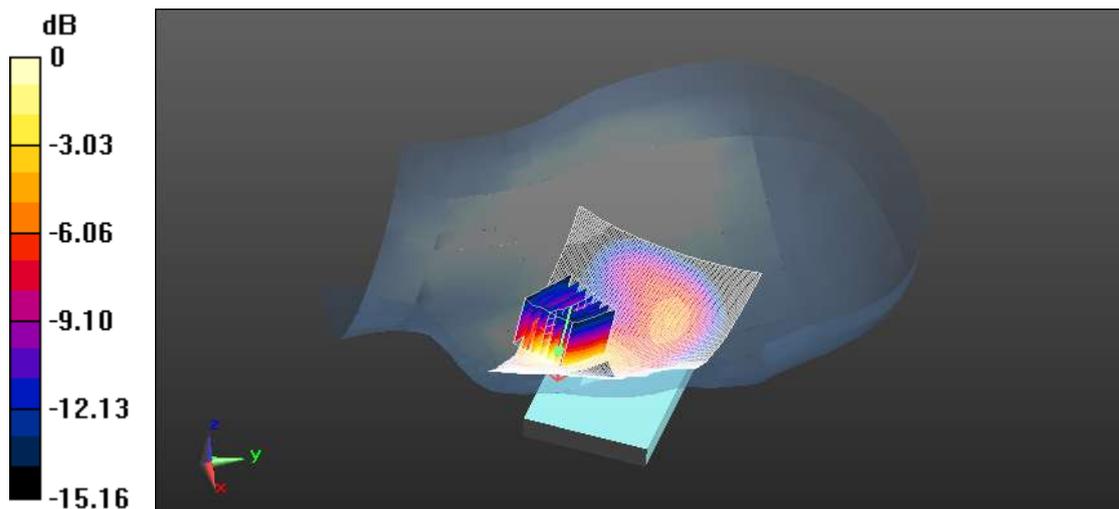**left/Touch Position - mid/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 14.329 V/m; Power Drift = -0.01 dB

Peak SAR (extrapolated) = 1.8350

SAR(1 g) = 1.15 mW/g; SAR(10 g) = 0.659 mW/g

Maximum value of SAR (measured) = 1.277 mW/g

0 dB = 1.280mW/g = 2.14 dB mW/g

WCDMA BAND II left Tilt mid

Date/Time: 2012/4/19 17:21:32

Communication System: WCDMA; Communication System Band: BAND 2;

Frequency: 1880 MHz; Communication System PAR: 0 dB

Medium parameters used: f = 1880 MHz; σ = 1.364 mho/m; ε_r = 39.144; ρ = 1000 kg/m^3

Phantom section: Left Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: ES3DV3 - SN3241; ConvF(5.09, 5.09, 5.09);
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1226; Calibrated: 2011/6/13
- Phantom: SAM2; Type: SAM; Serial: TP-1575
- Measurement SW: DASY52, Version 52.2 (0); SEMCAD X Version 14.6.4 (4989)

left/Tilt Position - mid/Area Scan (91x151x1): Measurement grid: dx=10mm, dy=10mm

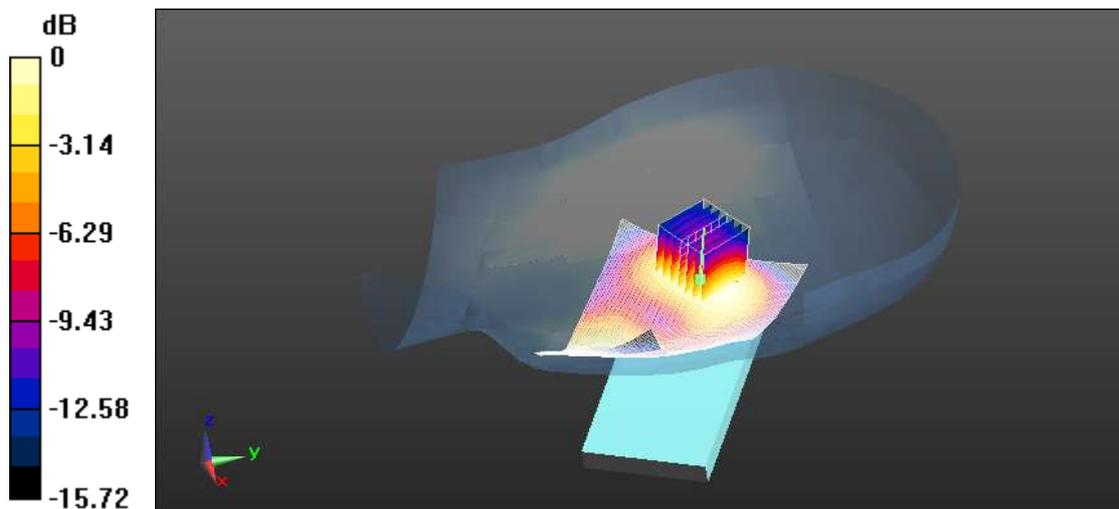Maximum value of SAR (interpolated) = 0.351 mW/g

left/Tilt Position - mid/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 15.758 V/m; Power Drift = -0.0012 dB

Peak SAR (extrapolated) = 0.4960

SAR(1 g) = 0.317 mW/g; SAR(10 g) = 0.193 mW/g

Maximum value of SAR (measured) = 0.344 mW/g

0 dB = 0.340mW/g = -9.37 dB mW/g

WCDMA BAND II right Touch mid

Date/Time: 2012/4/19 19:29:37

Communication System: WCDMA; Communication System Band: BAND 2;

Frequency: 1880 MHz; Communication System PAR: 0 dB

Medium parameters used: f = 1880 MHz; σ = 1.364 mho/m; ε_r = 39.144; ρ = 1000 kg/m^3

Phantom section: Right Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: ES3DV3 - SN3241; ConvF(5.09, 5.09, 5.09);
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1226; Calibrated: 2011/6/13
- Phantom: SAM2; Type: SAM; Serial: TP-1575
- Measurement SW: DASY52, Version 52.2 (0); SEMCAD X Version 14.6.4 (4989)

right/Touch Position - mid/Area Scan (91x151x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.638 mW/g

right/Touch Position - mid/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 13.642 V/m; Power Drift = 0.02 dB

Peak SAR (extrapolated) = 0.8890

SAR(1 g) = 0.583 mW/g; SAR(10 g) = 0.362 mW/g

Maximum value of SAR (measured) = 0.634 mW/g

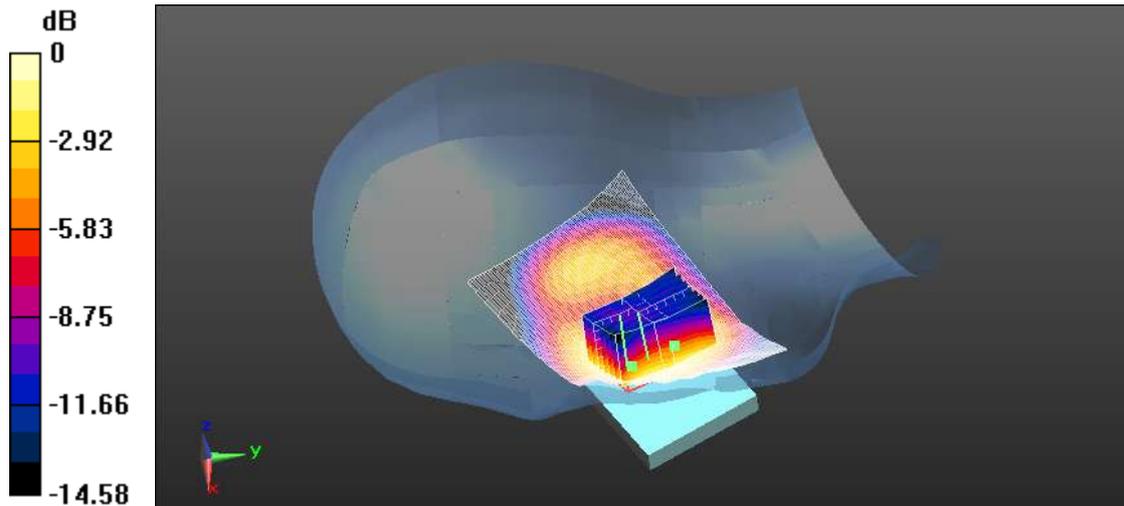**right/Touch Position - mid/Zoom Scan (7x7x7)/Cube 1:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 13.642 V/m; Power Drift = 0.02 dB

Peak SAR (extrapolated) = 0.7830

SAR(1 g) = 0.472 mW/g; SAR(10 g) = 0.297 mW/g

Maximum value of SAR (measured) = 0.558 mW/g

0 dB = 0.560mW/g = -5.04 dB mW/g

WCDMA BAND II right Tilt mid

Date/Time: 2012/4/19 20:11:28

Communication System: WCDMA; Communication System Band: BAND 2;

Frequency: 1880 MHz; Communication System PAR: 0 dB

Medium parameters used: f = 1880 MHz; σ = 1.364 mho/m; ε_r = 39.144; ρ = 1000 kg/m^3

Phantom section: Right Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: ES3DV3 - SN3241; ConvF(5.09, 5.09, 5.09);
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1226; Calibrated: 2011/6/13
- Phantom: SAM2; Type: SAM; Serial: TP-1575
- Measurement SW: DASY52, Version 52.2 (0); SEMCAD X Version 14.6.4 (4989)

right/Tilt Position - mid/Area Scan (91x151x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.344 mW/g

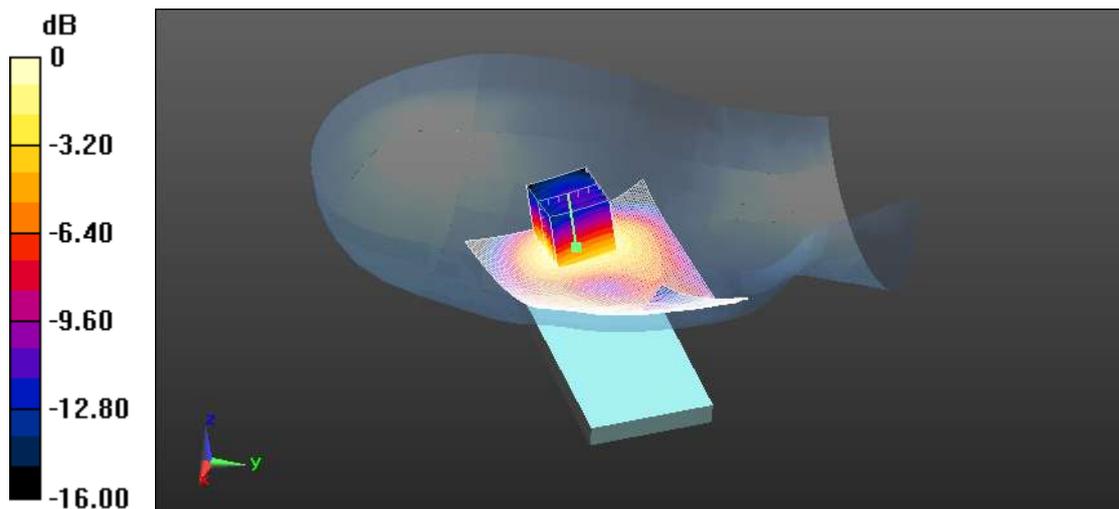**right/Tilt Position - mid/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 14.793 V/m; Power Drift = -0.05 dB

Peak SAR (extrapolated) = 0.5080

SAR(1 g) = 0.315 mW/g; SAR(10 g) = 0.185 mW/g

Maximum value of SAR (measured) = 0.347 mW/g

0 dB = 0.350mW/g = -9.12 dB mW/g

WCDMA BAND II left Touch low

Date/Time: 2012/4/19 17:51:23

Communication System: WCDMA; Communication System Band: BAND 2;

Frequency: 1852.4 MHz; Communication System PAR: 0 dB

Medium parameters used (interpolated): f = 1852.4 MHz; σ = 1.341 mho/m; $ε_r$ = 39.247; ρ = 1000 kg/m³

Phantom section: Left Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: ES3DV3 - SN3241; ConvF(5.09, 5.09, 5.09);
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1226; Calibrated: 2011/6/13
- Phantom: SAM2; Type: SAM; Serial: TP-1575
- Measurement SW: DASY52, Version 52.2 (0); SEMCAD X Version 14.6.4 (4989)

left/Touch Position - low/Area Scan (91x151x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 1.074 mW/g

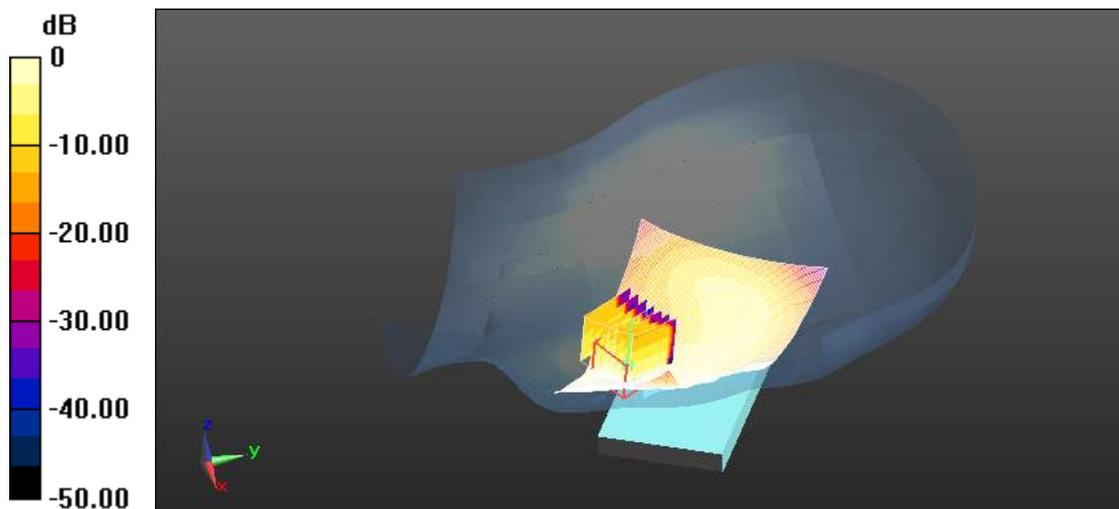**left/Touch Position - low/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 15.675 V/m; Power Drift = 0.02 dB

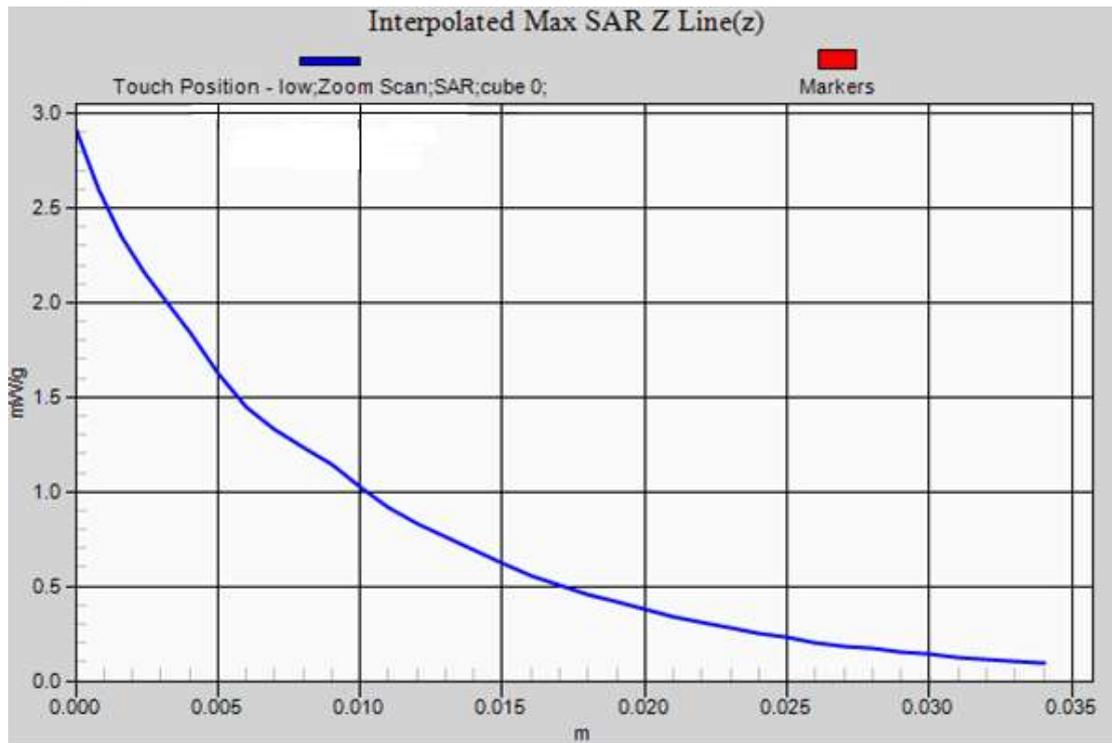Peak SAR (extrapolated) = 2.9100

SAR(1 g) = 1.17 mW/g; SAR(10 g) = 0.576 mW/g

Maximum value of SAR (measured) = 1.073 mW/g

0 dB = 1.070mW/g = 0.59 dB mW/g

Interpolated Max SAR Z Line(z)

Touch Position - low;Zoom Scan;SAR;cube 0;   Markers

WCDMA BAND II left Touch high

Date/Time: 2012/4/19 18:57:51

Communication System: WCDMA; Communication System Band: BAND 2;

Frequency: 1907.6 MHz; Communication System PAR: 0 dB

Medium parameters used: f = 1908 MHz; σ = 1.391 mho/m; ε_r = 39.019; ρ = 1000 kg/m^3

Phantom section: Left Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: ES3DV3 - SN3241; ConvF(5.09, 5.09, 5.09);
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1226; Calibrated: 2011/6/13
- Phantom: SAM2; Type: SAM; Serial: TP-1575
- Measurement SW: DASY52, Version 52.2 (0); SEMCAD X Version 14.6.4 (4989)

left/Touch Position - high/Area Scan (91x151x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.959 mW/g

left/Touch Position - high/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
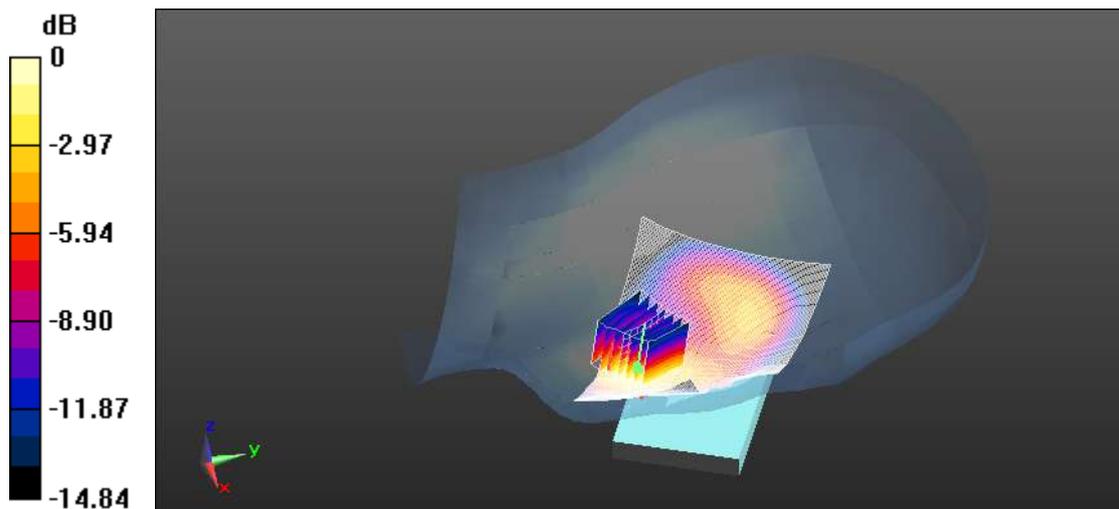
Reference Value = 15.982 V/m; Power Drift = -0.08 dB

Peak SAR (extrapolated) = 1.3920

SAR(1 g) = 0.877 mW/g; SAR(10 g) = 0.518 mW/g

Maximum value of SAR (measured) = 0.966 mW/g

0 dB = 0.970mW/g = -0.26 dB mW/g

WCDMA BAND II Towards phantom mid

Date/Time: 2012/4/22 19:27:05

Communication System: WCDMA; Communication System Band: BAND 2;

Frequency: 1880 MHz; Communication System PAR: 0 dB

Medium parameters used: f = 1880 MHz; σ = 1.477 mho/m; ε_r = 52.425; ρ = 1000 kg/m^3

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: ES3DV3 - SN3241; ConvF(4.67, 4.67, 4.67);
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1226; Calibrated: 2011/6/13
- Phantom: SAM2; Type: SAM; Serial: TP-1575
- Measurement SW: DASY52, Version 52.2 (0); SEMCAD X Version 14.6.4 (4989)

body/Towards phantom - mid/Area Scan (91x151x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.562 mW/g

body/Towards phantom - mid/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
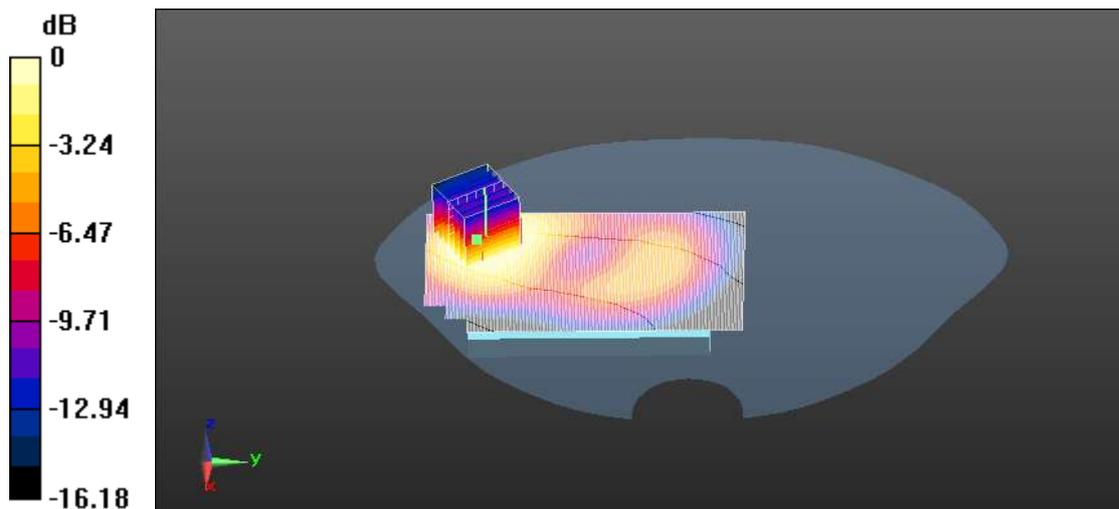
Reference Value = 9.172 V/m; Power Drift = 0.06 dB

Peak SAR (extrapolated) = 0.8540

SAR(1 g) = 0.518 mW/g; SAR(10 g) = 0.316 mW/g

Maximum value of SAR (measured) = 0.560 mW/g

0 dB = 0.560mW/g = -5.04 dB mW/g

WCDMA BAND II Towards ground mid

Date/Time: 2012/4/22 17:14:46

Communication System: WCDMA; Communication System Band: BAND 2;

Frequency: 1880 MHz; Communication System PAR: 0 dB

Medium parameters used: f = 1880 MHz; σ = 1.477 mho/m; ε_r = 52.425; ρ = 1000 kg/m^3

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: ES3DV3 - SN3241; ConvF(4.67, 4.67, 4.67);
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1226; Calibrated: 2011/6/13
- Phantom: SAM2; Type: SAM; Serial: TP-1575
- Measurement SW: DASY52, Version 52.2 (0); SEMCAD X Version 14.6.4 (4989)

body/Towards ground - mid/Area Scan (91x151x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 1.239 mW/g

body/Towards ground - mid/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
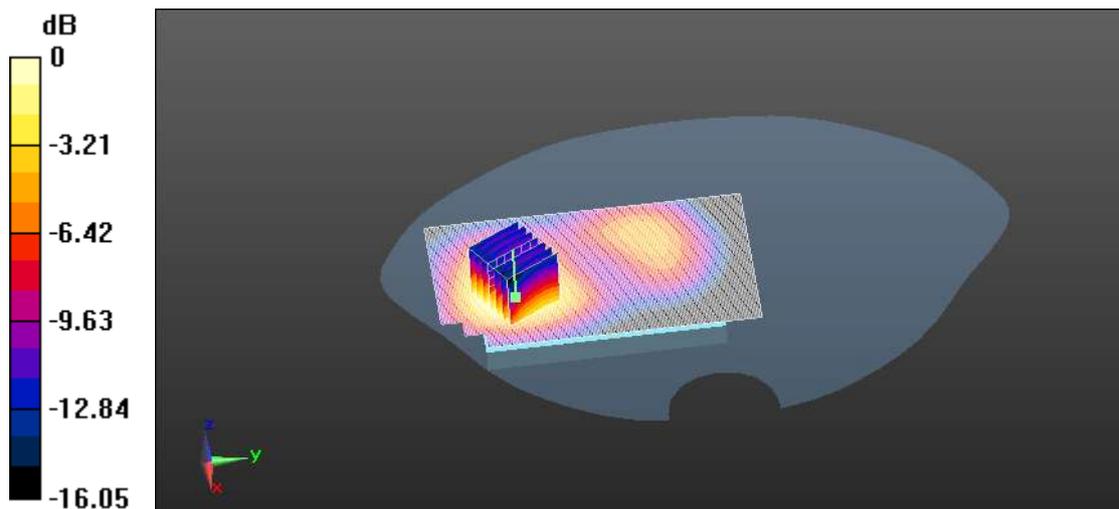
Reference Value = 10.319 V/m; Power Drift = 0.12 dB

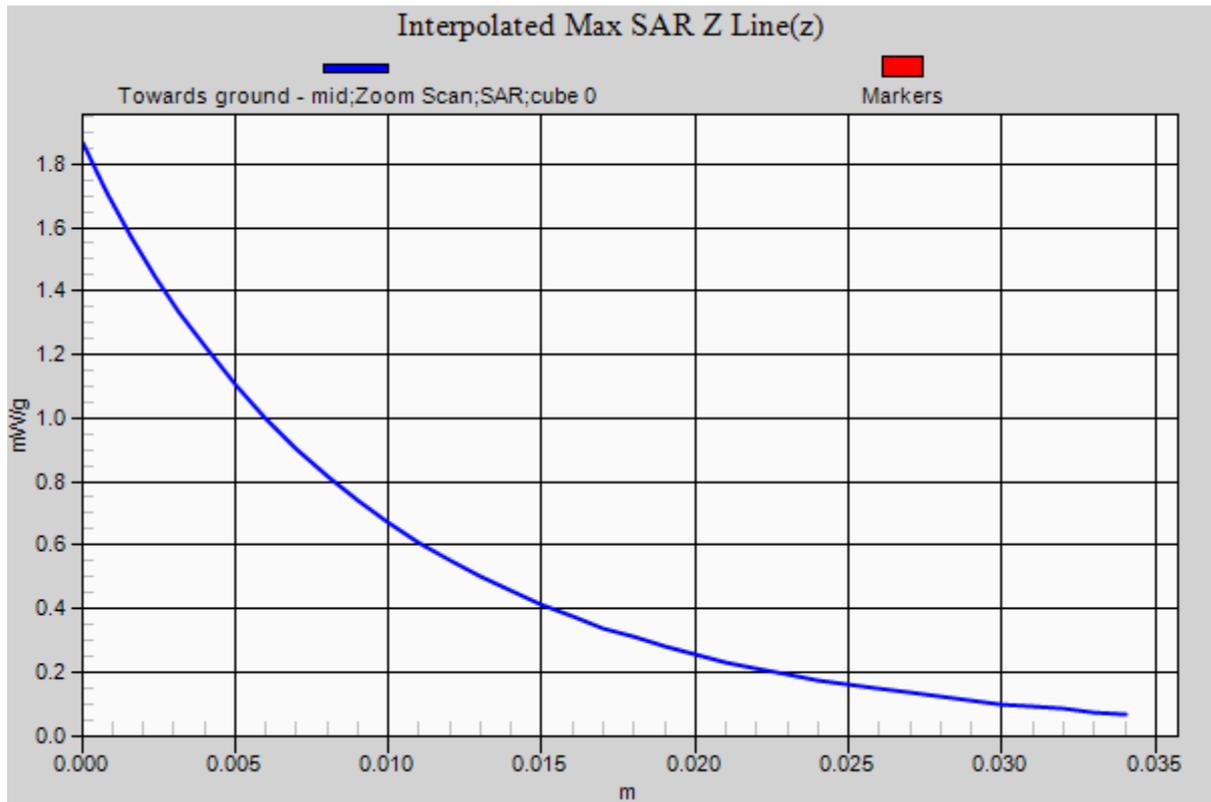Peak SAR (extrapolated) = 1.8660

SAR(1 g) = 1.14 mW/g; SAR(10 g) = 0.687 mW/g

Maximum value of SAR (measured) = 1.230 mW/g

0 dB = 1.230mW/g = 1.80 dB mW/g

WCDMA BAND II Towards front mid

Date/Time: 2012/4/22 22:01:52

Communication System: WCDMA; Communication System Band: BAND 2;

Frequency: 1880 MHz; Communication System PAR: 0 dB

Medium parameters used: f = 1880 MHz; σ = 1.477 mho/m; ε_r = 52.425; ρ = 1000 kg/m^3

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: ES3DV3 - SN3241; ConvF(4.67, 4.67, 4.67);
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1226; Calibrated: 2011/6/13
- Phantom: SAM2; Type: SAM; Serial: TP-1575
- Measurement SW: DASY52, Version 52.2 (0); SEMCAD X Version 14.6.4 (4989)

body/Towards front- mid/Area Scan (61x91x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.520 mW/g

body/Towards front- mid/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
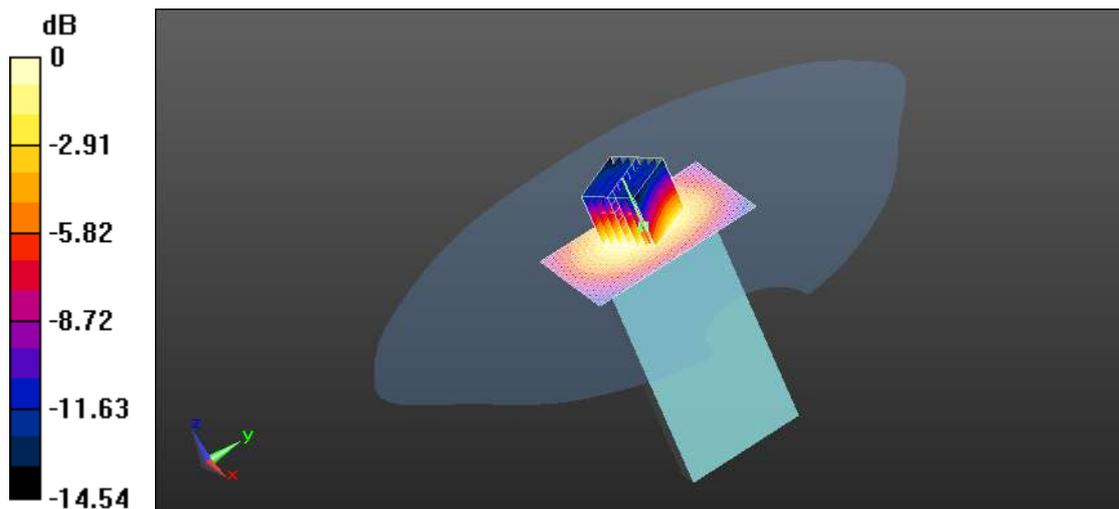
Reference Value = 15.111 V/m; Power Drift = -0.06 dB

Peak SAR (extrapolated) = 0.7370

SAR(1 g) = 0.456 mW/g; SAR(10 g) = 0.275 mW/g

Maximum value of SAR (measured) = 0.498 mW/g

0 dB = 0.500mW/g = -6.02 dB mW/g

WCDMA BAND II left side mid

Date/Time: 2012/4/22 20:05:05
Communication System: WCDMA; Communication System Band: BAND 2;
Frequency: 1880 MHz; Communication System PAR: 0 dB
Medium parameters used: f = 1880 MHz; σ = 1.477 mho/m; ε_r = 52.425; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)
DASY5 Configuration:

- Probe: ES3DV3 - SN3241; ConvF(4.67, 4.67, 4.67);
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1226; Calibrated: 2011/6/13
- Phantom: SAM2; Type: SAM; Serial: TP-1575
- Measurement SW: DASY52, Version 52.2 (0); SEMCAD X Version 14.6.4 (4989)

body2/left side - mid/Area Scan (61x151x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.357 mW/g

body2/left side - mid/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 5.853 V/m; Power Drift = 0.01 dB
Peak SAR (extrapolated) = 0.5580
SAR(1 g) = 0.325 mW/g; SAR(10 g) = 0.187 mW/g
Maximum value of SAR (measured) = 0.358 mW/g

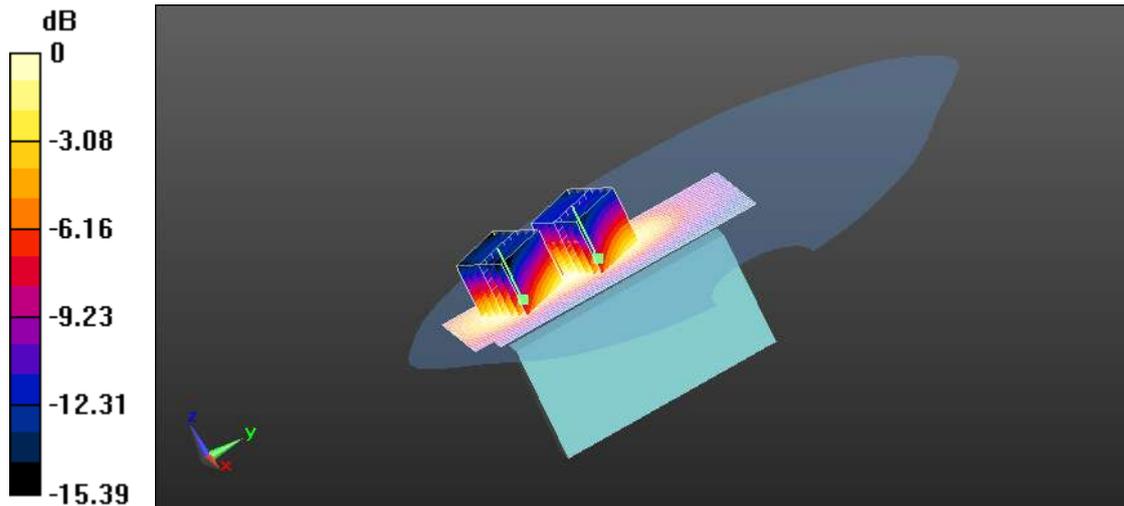**body2/left side - mid/Zoom Scan (7x7x7)/Cube 1:** Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 5.853 V/m; Power Drift = 0.01 dB
Peak SAR (extrapolated) = 0.5130
SAR(1 g) = 0.313 mW/g; SAR(10 g) = 0.188 mW/g
Maximum value of SAR (measured) = 0.345 mW/g

0 dB = 0.350mW/g = -9.12 dB mW/g

WCDMA BAND II right side mid

Date/Time: 2012/4/22 21:06:55

Communication System: WCDMA; Communication System Band: BAND 2;
Frequency: 1880 MHz; Communication System PAR: 0 dB
Medium parameters used: f = 1880 MHz; σ = 1.477 mho/m; ε_r = 52.425; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)
DASY5 Configuration:

- Probe: ES3DV3 - SN3241; ConvF(4.67, 4.67, 4.67);
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1226; Calibrated: 2011/6/13
- Phantom: SAM2; Type: SAM; Serial: TP-1575
- Measurement SW: DASY52, Version 52.2 (0); SEMCAD X Version 14.6.4 (4989)

body2/right side - mid/Area Scan (81x171x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.180 mW/g

body2/right side - mid/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 4.350 V/m; Power Drift = 0.11 dB
Peak SAR (extrapolated) = 0.2640
SAR(1 g) = 0.165 mW/g; SAR(10 g) = 0.099 mW/g
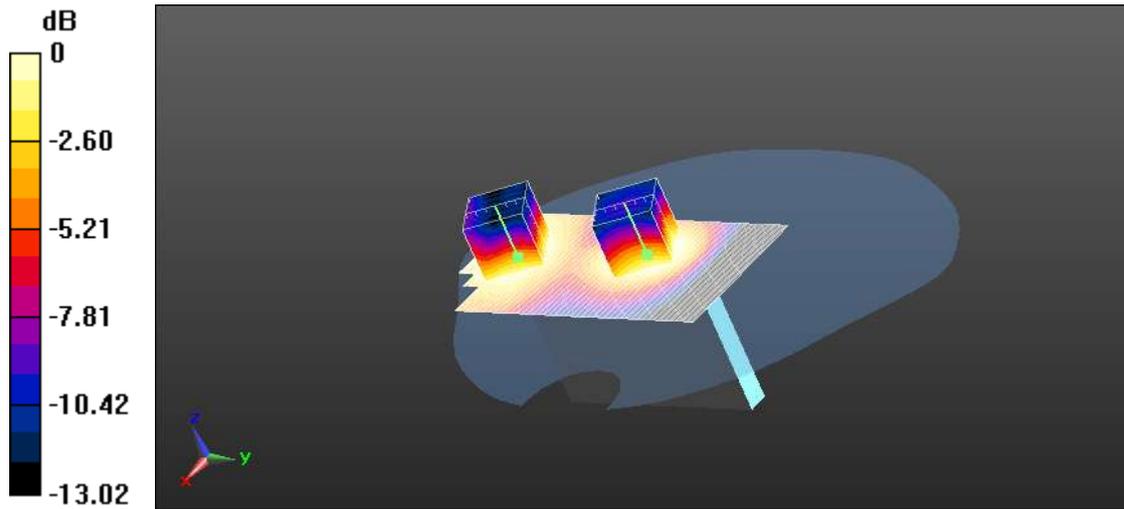Maximum value of SAR (measured) = 0.179 mW/g

body2/right side - mid/Zoom Scan (7x7x7)/Cube 1: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 4.350 V/m; Power Drift = 0.11 dB
Peak SAR (extrapolated) = 0.1790
SAR(1 g) = 0.116 mW/g; SAR(10 g) = 0.073 mW/g
Maximum value of SAR (measured) = 0.124 mW/g

0 dB = 0.120mW/g = -18.42 dB mW/g

WCDMA BAND II Towards ground low

Date/Time: 2012/4/22 17:51:05

Communication System: WCDMA; Communication System Band: BAND 2;

Frequency: 1852.4 MHz; Communication System PAR: 0 dB

Medium parameters used (interpolated): f = 1852.4 MHz; σ = 1.451 mho/m; ε_r = 52.481; ρ = 1000 kg/m^3

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: ES3DV3 - SN3241; ConvF(4.67, 4.67, 4.67);
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1226; Calibrated: 2011/6/13
- Phantom: SAM2; Type: SAM; Serial: TP-1575
- Measurement SW: DASY52, Version 52.2 (0); SEMCAD X Version 14.6.4 (4989)

body/Towards ground - low/Area Scan (91x151x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 1.099 mW/g

body/Towards ground - low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
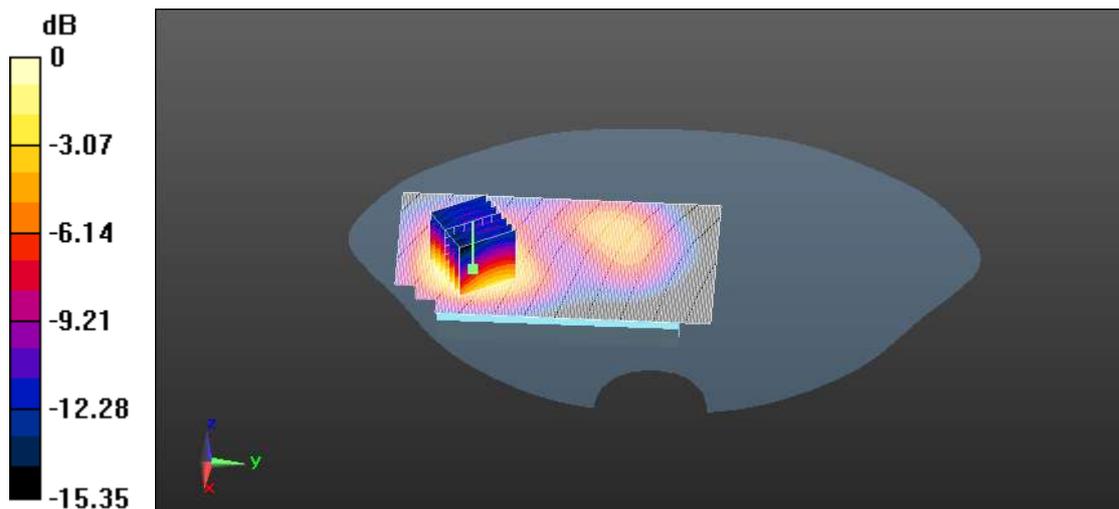
Reference Value = 11.045 V/m; Power Drift = -0.09 dB

Peak SAR (extrapolated) = 1.8490

SAR(1 g) = 1.13 mW/g; SAR(10 g) = 0.679 mW/g

Maximum value of SAR (measured) = 1.225 mW/g

0 dB = 1.220mW/g = 1.73 dB mW/g

WCDMA BAND II Towards ground high

Date/Time: 2012/4/22 18:50:35

Communication System: WCDMA; Communication System Band: BAND 2;

Frequency: 1907.6 MHz; Communication System PAR: 0 dB

Medium parameters used: f = 1908 MHz; σ = 1.502 mho/m; ε_r = 52.332; ρ = 1000 kg/m^3

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: ES3DV3 - SN3241; ConvF(4.67, 4.67, 4.67);
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1226; Calibrated: 2011/6/13
- Phantom: SAM2; Type: SAM; Serial: TP-1575
- Measurement SW: DASY52, Version 52.2 (0); SEMCAD X Version 14.6.4 (4989)

body/Towards ground -high/Area Scan (91x151x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 1.154 mW/g

body/Towards ground -high/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 9.772 V/m; Power Drift = 0.03 dB

Peak SAR (extrapolated) = 1.7300

SAR(1 g) = 1.06 mW/g; SAR(10 g) = 0.647 mW/g

Maximum value of SAR (measured) = 1.143 mW/g
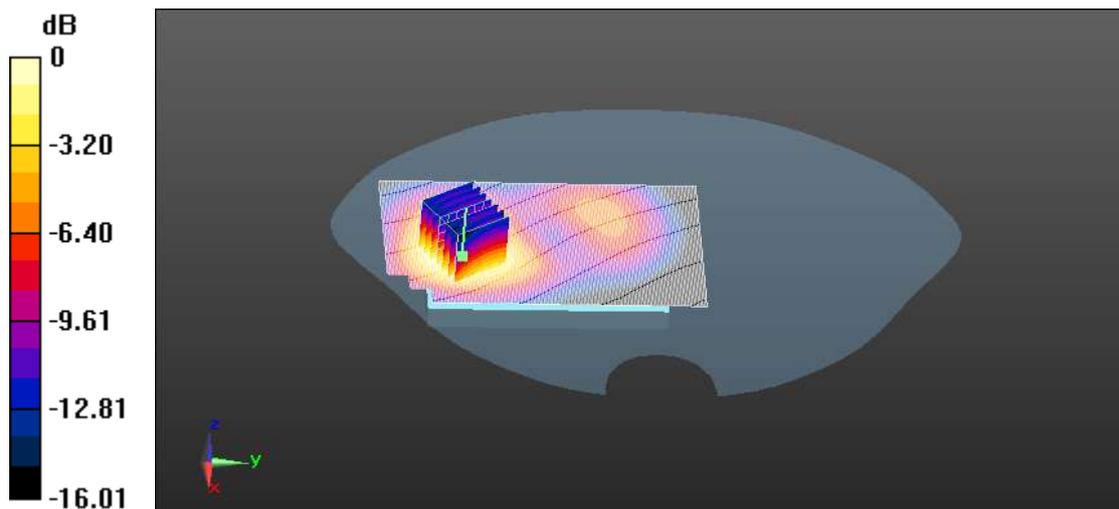
0 dB = 1.140mW/g = 1.14 dB mW/g

WCDMA BAND II Towards ground mid with earphone

Date/Time: 2012/4/22 22:31:20

Communication System: WCDMA; Communication System Band: BAND 2;

Frequency: 1880 MHz; Communication System PAR: 0 dB

Medium parameters used: f = 1880 MHz; σ = 1.477 mho/m; ε_r = 52.425; ρ = 1000 kg/m^3

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: ES3DV3 - SN3241; ConvF(4.67, 4.67, 4.67);
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1226; Calibrated: 2011/6/13
- Phantom: SAM2; Type: SAM; Serial: TP-1575
- Measurement SW: DASY52, Version 52.2 (0); SEMCAD X Version 14.6.4 (4989)

body/Towards ground - mid with earphone/Area Scan (91x151x1):

Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.797 mW/g

body/Towards ground - mid with earphone/Zoom Scan (7x7x7)/Cube 0:

Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 9.685 V/m; Power Drift = 0.05 dB

Peak SAR (extrapolated) = 1.1690

SAR(1 g) = 0.725 mW/g; SAR(10 g) = 0.446 mW/g

Maximum value of SAR (measured) = 0.782 mW/g
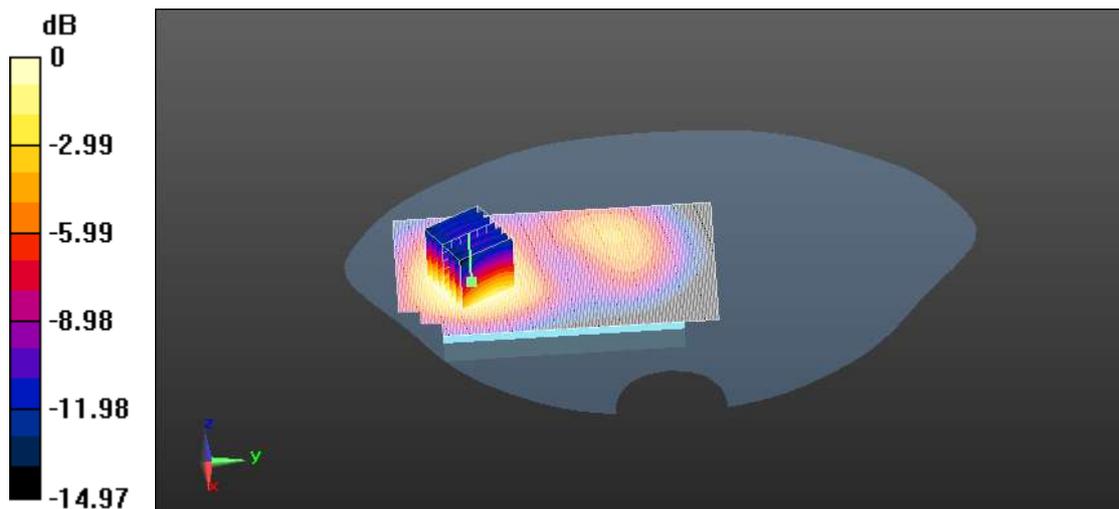
0 dB = 0.780mW/g = -2.16 dB mW/g

WCDMA BAND II Towards ground mid with HSDPA

Date/Time: 2012/4/22 23:02:40

Communication System: WCDMA; Communication System Band: BAND 2;

Frequency: 1880 MHz; Communication System PAR: 0 dB

Medium parameters used: f = 1880 MHz; σ = 1.477 mho/m; $ε_r$ = 52.425; ρ = 1000 kg/m^3

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: ES3DV3 - SN3241; ConvF(4.67, 4.67, 4.67);
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1226; Calibrated: 2011/6/13
- Phantom: SAM2; Type: SAM; Serial: TP-1575
- Measurement SW: DASY52, Version 52.2 (0); SEMCAD X Version 14.6.4 (4989)

body/Towards ground - mid with HSDPA/Area Scan (91x151x1):

Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.775 mW/g

## body/Towards ground - mid with HSDPA/Zoom Scan (7x7x7)/Cube 0:

Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 9.806 V/m; Power Drift = 0.02 dB

Peak SAR (extrapolated) = 1.1640

SAR(1 g) = 0.722 mW/g; SAR(10 g) = 0.445 mW/g

Maximum value of SAR (measured) = 0.779 mW/g
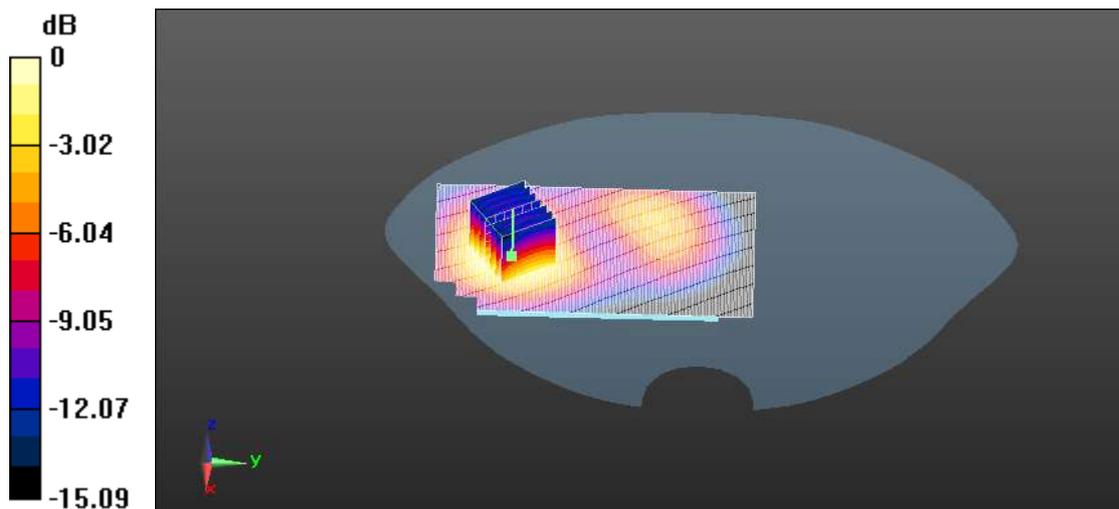
0 dB = 0.780mW/g = -2.16 dB mW/g

WCDMA BAND V left Touch mid

Date/Time: 2012/4/19 21:55:12

Communication System: WCDMA; Communication System Band: BAND 5;

Frequency: 836.6 MHz; Communication System PAR: 0 dB

Medium parameters used (interpolated): f = 836.6 MHz; σ = 0.883 mho/m; ε_r = 41.292; ρ = 1000 kg/m^3

Phantom section: Left Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: ES3DV3 - SN3241; ConvF(6.18, 6.18, 6.18);
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1226; Calibrated: 2011/6/13
- Phantom: SAM1; Type: SAM; Serial: TP1576
- Measurement SW: DASY52, Version 52.2 (0); SEMCAD X Version 14.6.4 (4989)

left/Touch Position - mid/Area Scan (91x151x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.482 mW/g

left/Touch Position - mid/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 7.777 V/m; Power Drift = 0.07 dB

Peak SAR (extrapolated) = 0.6430

SAR(1 g) = 0.465 mW/g; SAR(10 g) = 0.341 mW/g

Maximum value of SAR (measured) = 0.498 mW/g
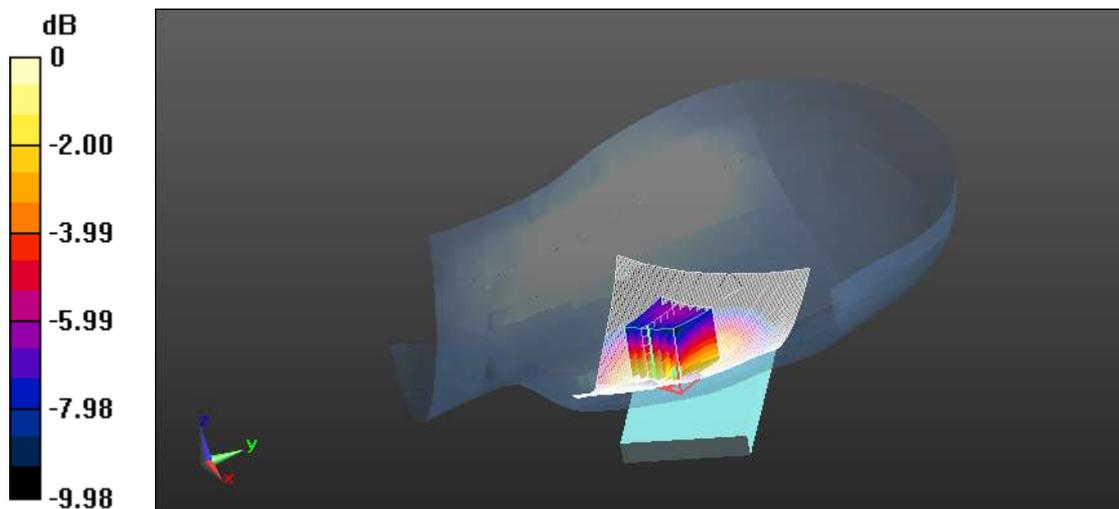
0 dB = 0.500mW/g = -6.02 dB mW/g

WCDMA BAND V left Tilt mid

Date/Time: 2012/4/19 22:46:40

Communication System: WCDMA; Communication System Band: BAND 5;

Frequency: 836.6 MHz; Communication System PAR: 0 dB

Medium parameters used (interpolated): f = 836.6 MHz; σ = 0.883 mho/m; ε_r = 41.292; ρ = 1000 kg/m^3

Phantom section: Left Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: ES3DV3 - SN3241; ConvF(6.18, 6.18, 6.18);
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1226; Calibrated: 2011/6/13
- Phantom: SAM1; Type: SAM; Serial: TP1576
- Measurement SW: DASY52, Version 52.2 (0); SEMCAD X Version 14.6.4 (4989)

left/Tilt Position - mid/Area Scan (91x151x1): Measurement grid: dx=10mm, dy=10mm.

Maximum value of SAR (interpolated) = 0.259 mW/g

**left/Tilt Position - mid/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 11.658 V/m; Power Drift = 0.03 dB

Peak SAR (extrapolated) = 0.3100

SAR(1 g) = 0.247 mW/g; SAR(10 g) = 0.189 mW/g

Maximum value of SAR (measured) = 0.257 mW/g
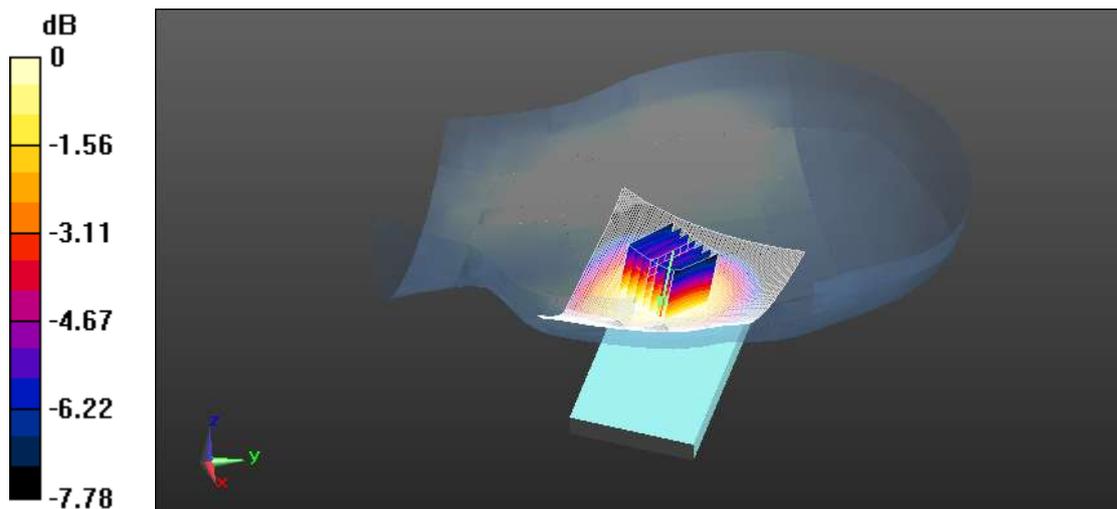
0 dB = 0.260mW/g = -11.70 dB mW/g

WCDMA BAND V right Touch mid

Date/Time: 2012/4/19 23:20:20

Communication System: WCDMA; Communication System Band: BAND 5;

Frequency: 836.6 MHz; Communication System PAR: 0 dB

Medium parameters used (interpolated): f = 836.6 MHz; σ = 0.883 mho/m; ε_r = 41.292; ρ = 1000 kg/m^3

Phantom section: Right Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: ES3DV3 - SN3241; ConvF(6.18, 6.18, 6.18);
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1226; Calibrated: 2011/6/13
- Phantom: SAM1; Type: SAM; Serial: TP1576
- Measurement SW: DASY52, Version 52.2 (0); SEMCAD X Version 14.6.4 (4989)

right/Touch Position - mid/Area Scan (91x151x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.496 mW/g

**right/Touch Position - mid/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 9.095 V/m; Power Drift = 0.03 dB

Peak SAR (extrapolated) = 0.6040

SAR(1 g) = 0.476 mW/g; SAR(10 g) = 0.355 mW/g

Maximum value of SAR (measured) = 0.510 mW/g
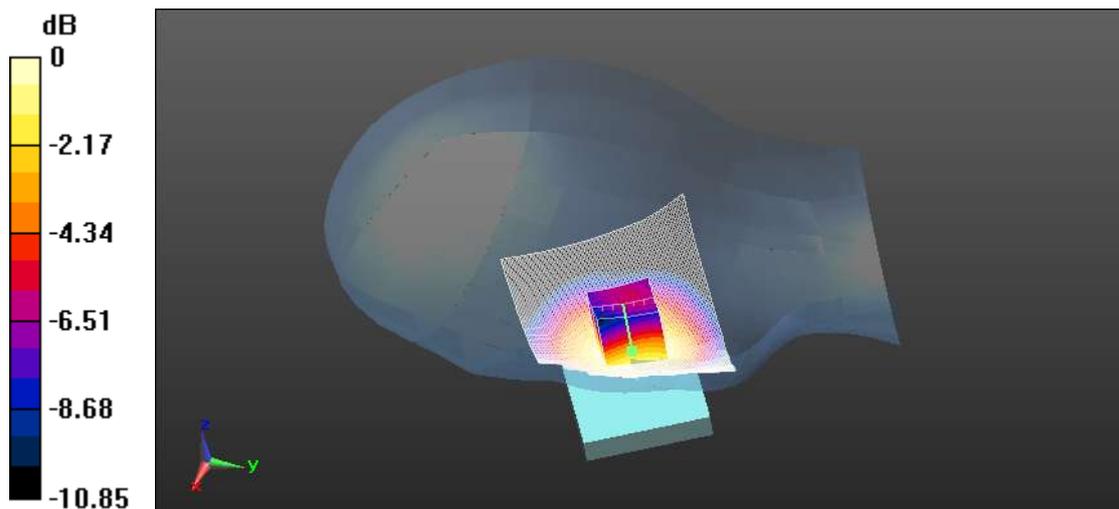
0 dB = 0.510mW/g = -5.85 dB mW/g

WCDMA BAND V right Tilt mid

Date/Time: 2012/4/19 23:50:36

Communication System: WCDMA; Communication System Band: BAND 5;

Frequency: 836.6 MHz; Communication System PAR: 0 dB

Medium parameters used (interpolated): f = 836.6 MHz; σ = 0.883 mho/m; ε_r = 41.292; ρ = 1000 kg/m^3

Phantom section: Right Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: ES3DV3 - SN3241; ConvF(6.18, 6.18, 6.18);
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1226; Calibrated: 2011/6/13
- Phantom: SAM1; Type: SAM; Serial: TP1576
- Measurement SW: DASY52, Version 52.2 (0); SEMCAD X Version 14.6.4 (4989)

right/Tilt Position - mid/Area Scan (91x151x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.278 mW/g

right/Tilt Position - mid/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 12.493 V/m; Power Drift = 0.07 dB

Peak SAR (extrapolated) = 0.3340

SAR(1 g) = 0.266 mW/g; SAR(10 g) = 0.203 mW/g

Maximum value of SAR (measured) = 0.279 mW/g
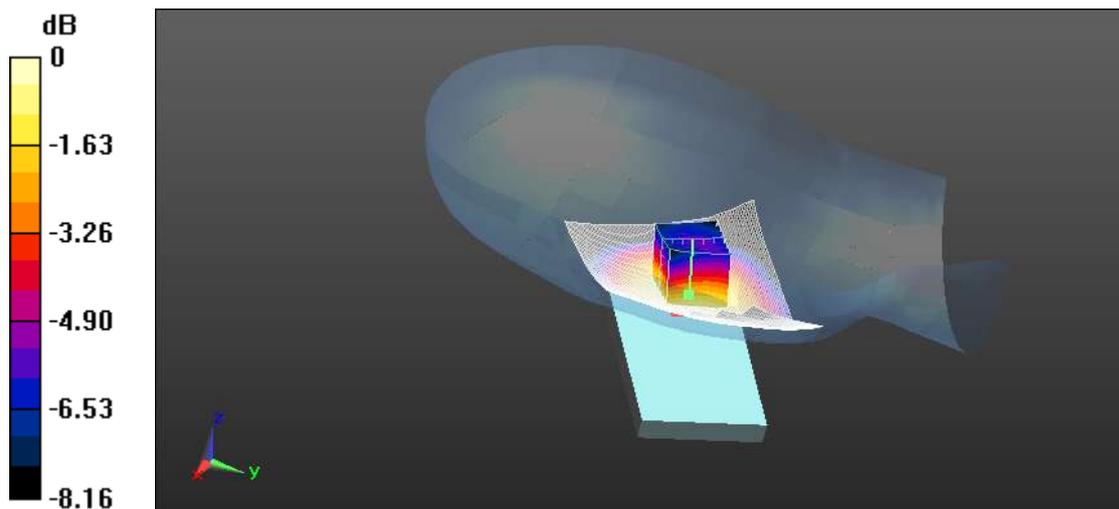
0 dB = 0.280mW/g = -11.06 dB mW/g

WCDMA BAND V right Touch low

Date/Time: 2012/4/20 0:23:53

Communication System: WCDMA; Communication System Band: BAND 5;

Frequency: 826.4 MHz; Communication System PAR: 0 dB

Medium parameters used: f = 827 MHz; σ = 0.874 mho/m; ε_r = 41.411; ρ = 1000 kg/m^3

Phantom section: Right Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: ES3DV3 - SN3241; ConvF(6.18, 6.18, 6.18);
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1226; Calibrated: 2011/6/13
- Phantom: SAM1; Type: SAM; Serial: TP1576
- Measurement SW: DASY52, Version 52.2 (0); SEMCAD X Version 14.6.4 (4989)

right/Touch Position - low/Area Scan (91x151x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.505 mW/g

**right/Touch Position - low/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 9.187 V/m; Power Drift = 0.02 dB

Peak SAR (extrapolated) = 0.6050

SAR(1 g) = 0.486 mW/g; SAR(10 g) = 0.366 mW/g

Maximum value of SAR (measured) = 0.509 mW/g
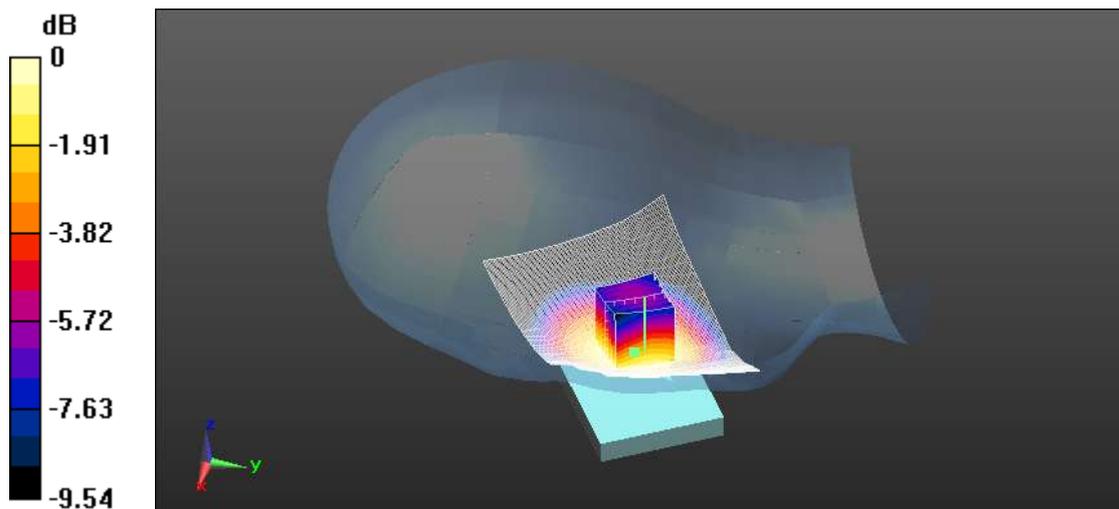
0 dB = 0.510mW/g = -5.85 dB mW/g

WCDMA BAND V right Touch high

Date/Time: 2012/4/20 0:52:52

Communication System: WCDMA; Communication System Band: BAND 5;

Frequency: 846.6 MHz; Communication System PAR: 0 dB

Medium parameters used (interpolated): f = 846.6 MHz; σ = 0.893 mho/m; ε_r = 41.161; ρ = 1000 kg/m^3

Phantom section: Right Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: ES3DV3 - SN3241; ConvF(6.18, 6.18, 6.18);
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1226; Calibrated: 2011/6/13
- Phantom: SAM1; Type: SAM; Serial: TP1576
- Measurement SW: DASY52, Version 52.2 (0); SEMCAD X Version 14.6.4 (4989)

right/Touch Position - high/Area Scan (91x151x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.692 mW/g

**right/Touch Position - high/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 10.159 V/m; Power Drift = 0.11 dB

Peak SAR (extrapolated) = 0.8210

SAR(1 g) = 0.659 mW/g; SAR(10 g) = 0.495 mW/g

Maximum value of SAR (measured) = 0.691 mW/g
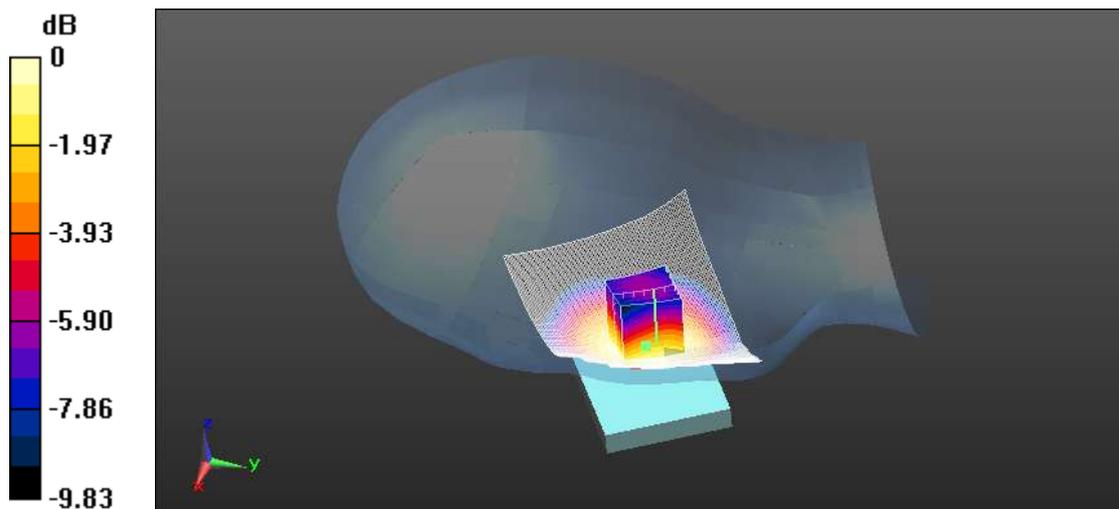
0 dB = 0.690mW/g = -3.22 dB mW/g

WCDMA BAND V Towards phantom mid

Date/Time: 2012/4/23 8:55:11

Communication System: WCDMA; Communication System Band: BAND 5;

Frequency: 836.6 MHz; Communication System PAR: 0 dB

Medium parameters used: f = 837 MHz; σ = 0.951 mho/m; ε_r = 54.241; ρ = 1000 kg/m^3

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: ES3DV3 - SN3241; ConvF(6.19, 6.19, 6.19);
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1226; Calibrated: 2011/6/13
- Phantom: SAM1; Type: SAM; Serial: TP1576
- Measurement SW: DASY52, Version 52.2 (0); SEMCAD X Version 14.6.4 (4989)

body/Towards phantom - mid/Area Scan (91x151x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.743 mW/g

body/Towards phantom - mid/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 9.232 V/m; Power Drift = -0.17 dB

Peak SAR (extrapolated) = 0.9450

SAR(1 g) = 0.711 mW/g; SAR(10 g) = 0.530 mW/g

Maximum value of SAR (measured) = 0.745 mW/g

0 dB = 0.740mW/g = -2.62 dB mW/g

WCDMA BAND V Towards ground mid

Date/Time: 2012/4/23 9:25:43

Communication System: WCDMA; Communication System Band: BAND 5;

Frequency: 836.6 MHz; Communication System PAR: 0 dB

Medium parameters used: f = 837 MHz; σ = 0.951 mho/m; ε_r = 54.241; ρ = 1000 kg/m^3

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: ES3DV3 - SN3241; ConvF(6.19, 6.19, 6.19);
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1226; Calibrated: 2011/6/13
- Phantom: SAM1; Type: SAM; Serial: TP1576
- Measurement SW: DASY52, Version 52.2 (0); SEMCAD X Version 14.6.4 (4989)

body/Towards ground - mid/Area Scan (91x151x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 1.031 mW/g

**body/Towards ground - mid/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 10.442 V/m; Power Drift = -0.07 dB

Peak SAR (extrapolated) = 1.2970

SAR(1 g) = 0.973 mW/g; SAR(10 g) = 0.710 mW/g

Maximum value of SAR (measured) = 1.032 mW/g
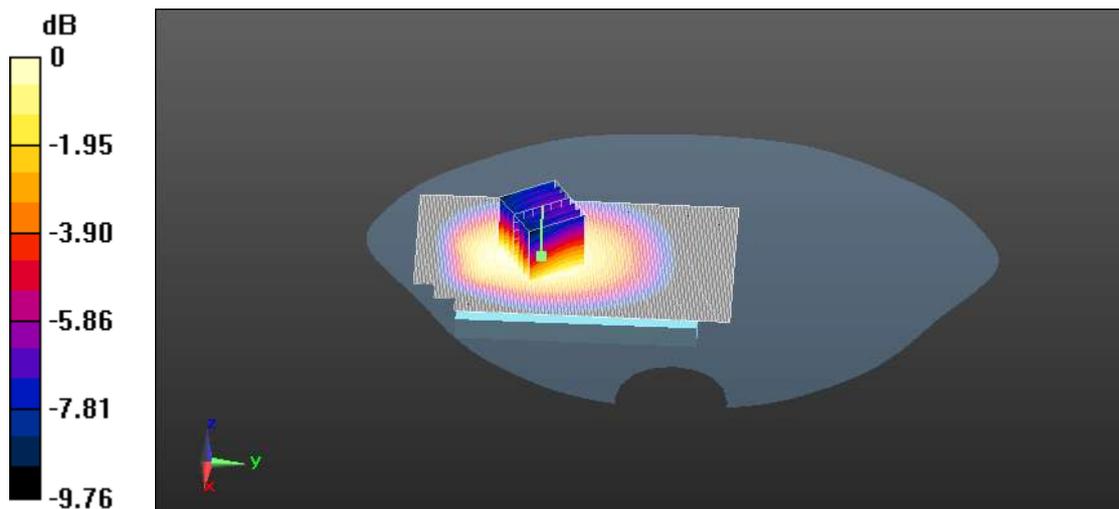
0dB = 1.030mW/g = 0.26 dB mW/g

WCDMA BAND V front- mid

Date/Time: 2012/4/23 12:20:14

Communication System: WCDMA; Communication System Band: BAND 5;

Frequency: 836.6 MHz; Communication System PAR: 0 dB

Medium parameters used: f = 837 MHz; σ = 0.951 mho/m; ε_r = 54.241; ρ = 1000 kg/m^3

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: ES3DV3 - SN3241; ConvF(6.19, 6.19, 6.19);
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1226; Calibrated: 2011/6/13
- Phantom: SAM1; Type: SAM; Serial: TP1576
- Measurement SW: DASY52, Version 52.2 (0); SEMCAD X Version 14.6.4 (4989)

body/Towards front- mid/Area Scan (61x91x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.122 mW/g

body/Towards front- mid/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
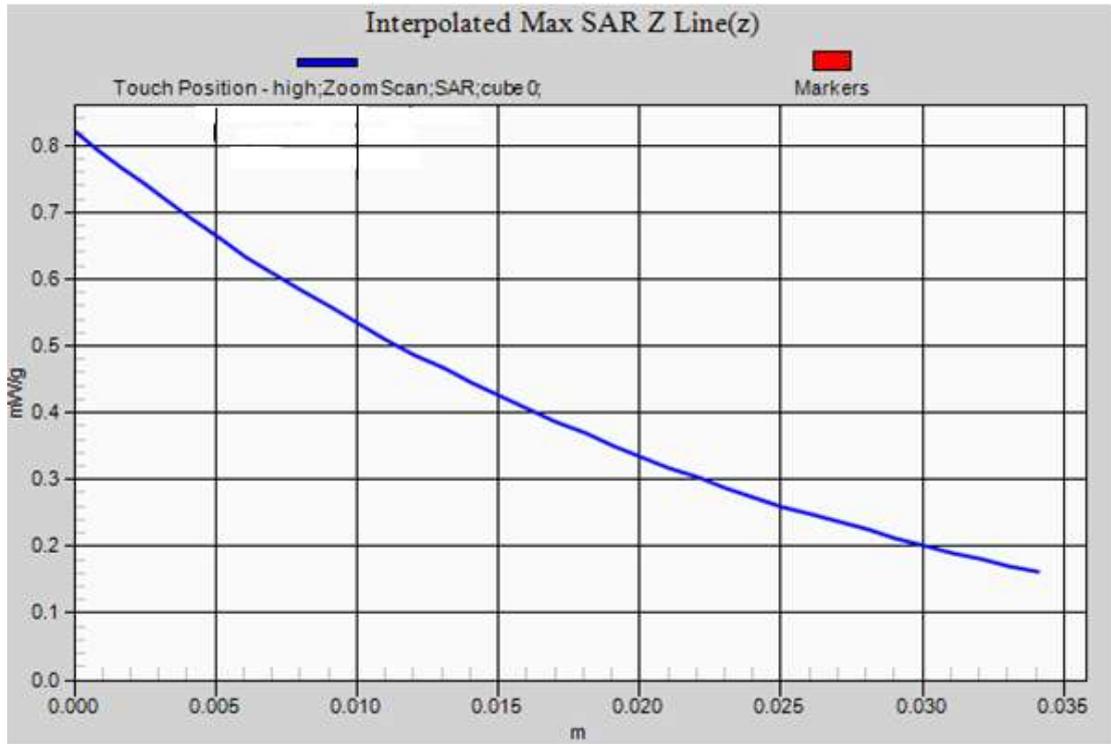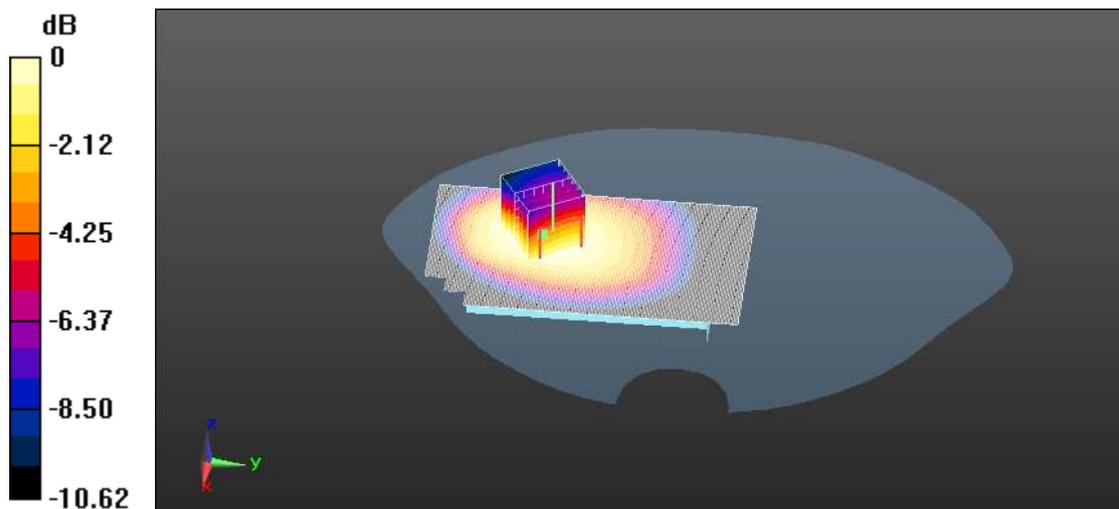
Reference Value = 7.470 V/m; Power Drift = 0.12 dB

Peak SAR (extrapolated) = 0.3080

SAR(1 g) = 0.111 mW/g; SAR(10 g) = 0.050 mW/g

Maximum value of SAR (measured) = 0.123 mW/g

0 dB = 0.120mW/g = -18.42 dB mW/g

WCDMA BAND V left side mid

Date/Time: 2012/4/23 11:12:02

Communication System: WCDMA; Communication System Band: BAND 5;

Frequency: 836.6 MHz; Communication System PAR: 0 dB

Medium parameters used: f = 837 MHz; σ = 0.951 mho/m; ε_r = 54.241; ρ = 1000 kg/m^3

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: ES3DV3 - SN3241; ConvF(6.19, 6.19, 6.19);
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1226; Calibrated: 2011/6/13
- Phantom: SAM1; Type: SAM; Serial: TP1576
- Measurement SW: DASY52, Version 52.2 (0); SEMCAD X Version 14.6.4 (4989)

body2/left side - mid/Area Scan (61x151x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.639 mW/g

body2/left side - mid/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 10.345 V/m; Power Drift = -0.14 dB

Peak SAR (extrapolated) = 0.8980

SAR(1 g) = 0.604 mW/g; SAR(10 g) = 0.404 mW/g

Maximum value of SAR (measured) = 0.649 mW/g
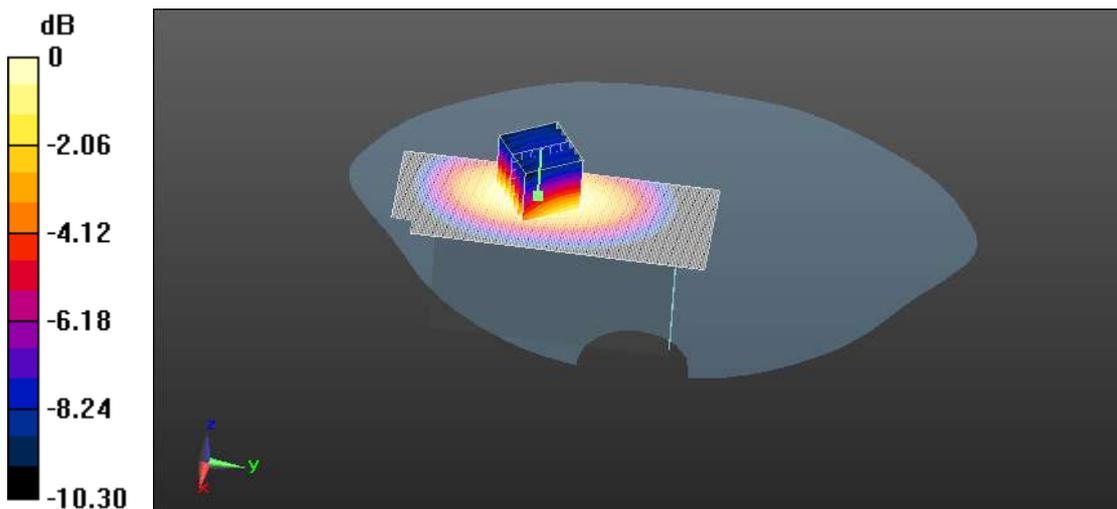
0 dB = 0.650mW/g = -3.74 dB mW/g

WCDMA BAND V right side mid

Date/Time: 2012/4/23 11:50:34

Communication System: WCDMA; Communication System Band: BAND 5;

Frequency: 836.6 MHz; Communication System PAR: 0 dB

Medium parameters used: f = 837 MHz; σ = 0.951 mho/m; ε_r = 54.241; ρ = 1000 kg/m^3

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: ES3DV3 - SN3241; ConvF(6.19, 6.19, 6.19);
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1226; Calibrated: 2011/6/13
- Phantom: SAM1; Type: SAM; Serial: TP1576
- Measurement SW: DASY52, Version 52.2 (0); SEMCAD X Version 14.6.4 (4989)

body2/right side - mid/Area Scan (61x151x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.557 mW/g

**body2/right side - mid/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm
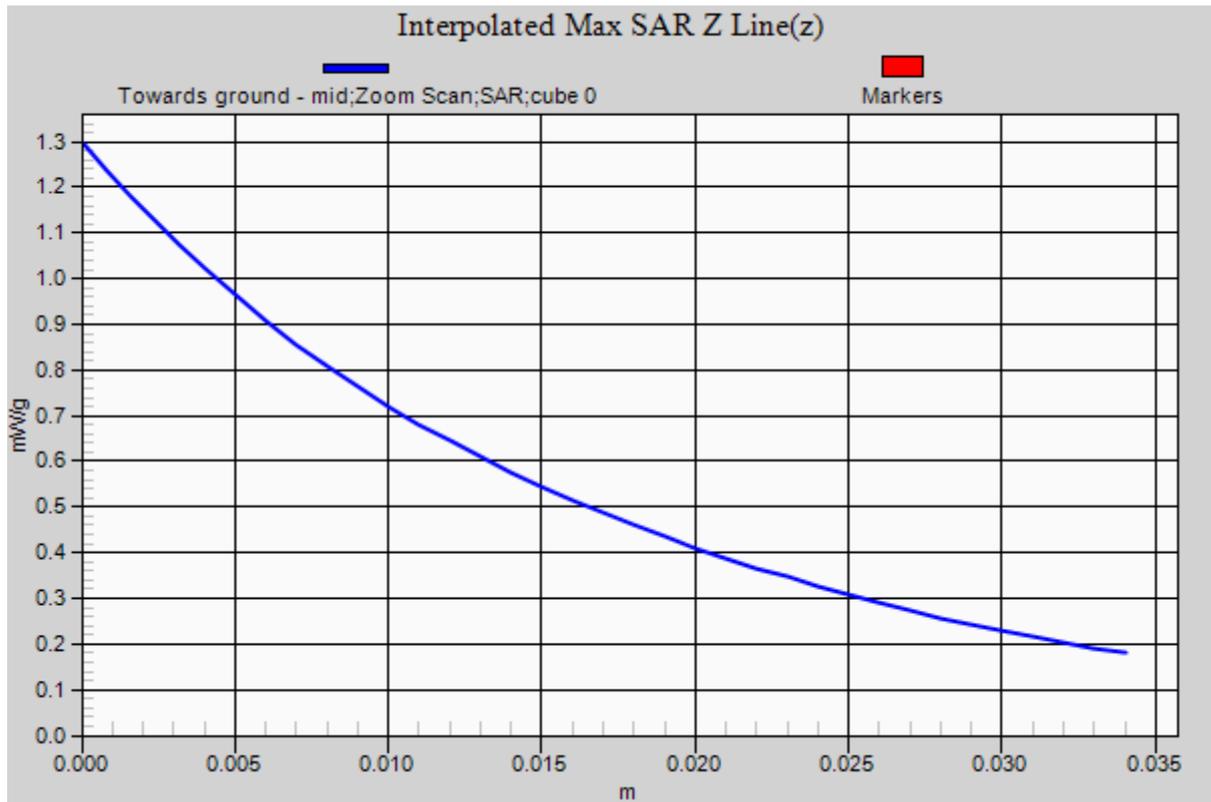
Reference Value = 8.769 V/m; Power Drift = 0.05 dB

Peak SAR (extrapolated) = 0.7650

SAR(1 g) = 0.520 mW/g; SAR(10 g) = 0.352 mW/g

Maximum value of SAR (measured) = 0.556 mW/g
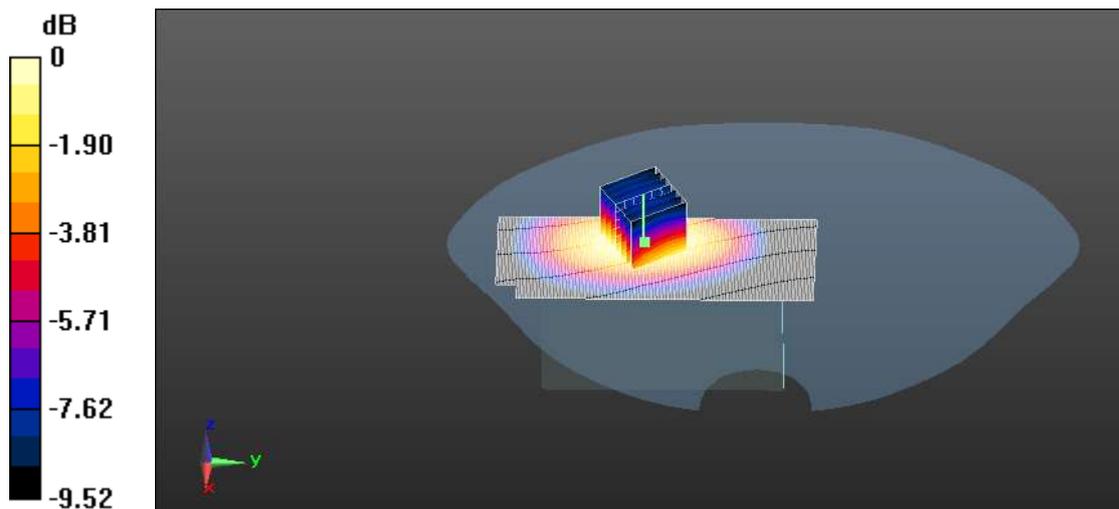
0 dB = 0.560mW/g = -5.04 dB mW/g

WCDMA BAND V Towards ground low

Date/Time: 2012/4/23 10:05:25

Communication System: WCDMA; Communication System Band: BAND 5;

Frequency: 826.4 MHz; Communication System PAR: 0 dB

Medium parameters used (interpolated): f = 826.4 MHz; σ = 0.936 mho/m; ε_r = 54.3; ρ = 1000 kg/m^3

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: ES3DV3 - SN3241; ConvF(6.19, 6.19, 6.19);
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1226; Calibrated: 2011/6/13
- Phantom: SAM1; Type: SAM; Serial: TP1576
- Measurement SW: DASY52, Version 52.2 (0); SEMCAD X Version 14.6.4 (4989)

body/Towards ground - low/Area Scan (91x151x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.954 mW/g

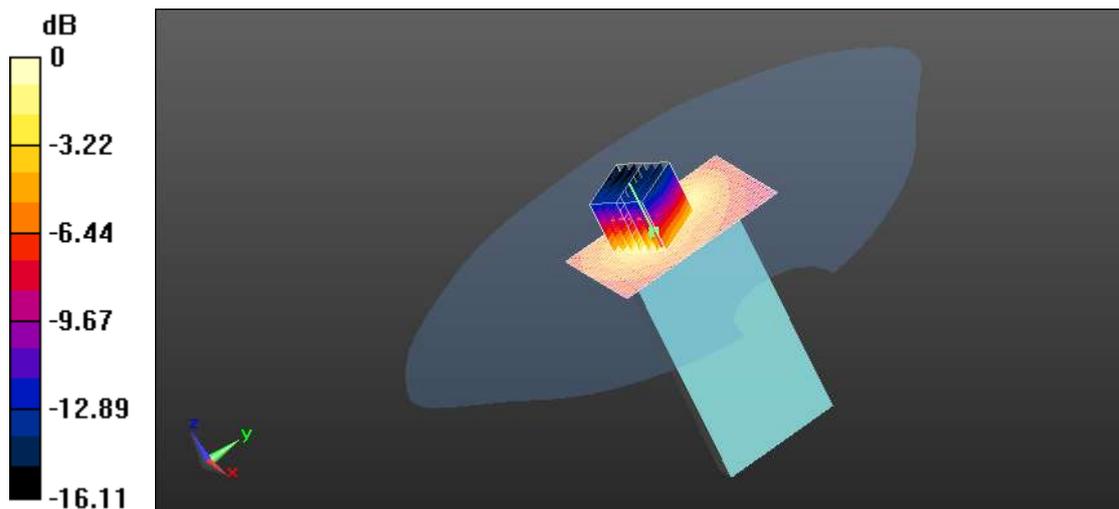**body/Towards ground - low/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 10.903 V/m; Power Drift = 0.0026 dB

Peak SAR (extrapolated) = 1.2130

SAR(1 g) = 0.910 mW/g; SAR(10 g) = 0.665 mW/g

Maximum value of SAR (measured) = 0.958 mW/g
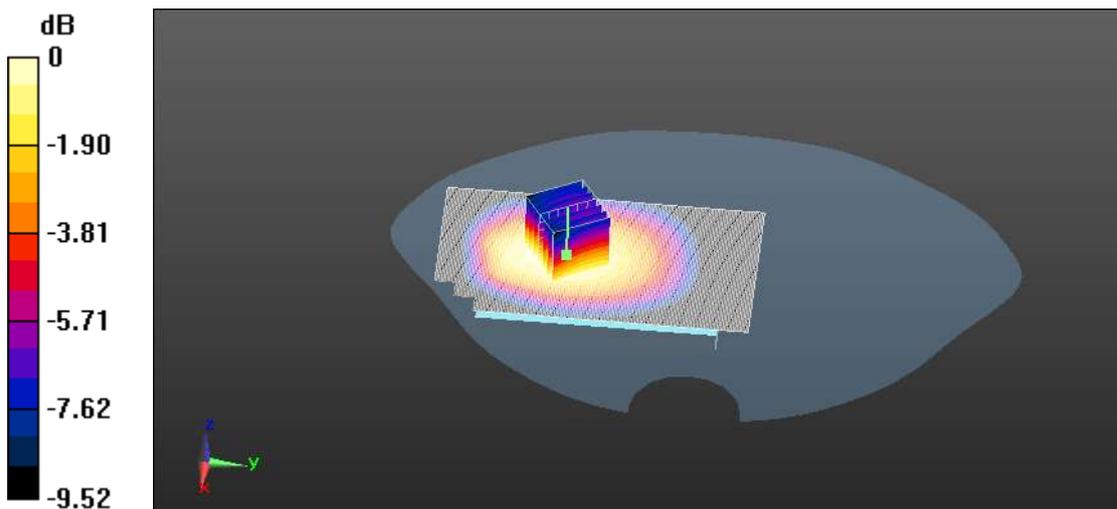
0 dB = 0.960mW/g = -0.35 dB mW/g

WCDMA BAND V Towards ground high

Date/Time: 2012/4/23 10:36:38

Communication System: WCDMA; Communication System Band: BAND 5;

Frequency: 846.6 MHz; Communication System PAR: 0 dB

Medium parameters used: f = 847 MHz; σ = 0.965 mho/m; ε_r = 54.169; ρ = 1000 kg/m^3

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: ES3DV3 - SN3241; ConvF(6.19, 6.19, 6.19);
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1226; Calibrated: 2011/6/13
- Phantom: SAM1; Type: SAM; Serial: TP1576
- Measurement SW: DASY52, Version 52.2 (0); SEMCAD X Version 14.6.4 (4989)

body/Towards ground - high/Area Scan (91x151x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.900 mW/g

body/Towards ground - high/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 10.480 V/m; Power Drift = 0.03 dB

Peak SAR (extrapolated) = 1.1350

SAR(1 g) = 0.855 mW/g; SAR(10 g) = 0.623 mW/g

Maximum value of SAR (measured) = 0.901 mW/g

0 dB = 0.900mW/g = -0.92 dB mW/g

WCDMA BAND V Towards ground mid with earphone

Date/Time: 2012/4/23 12:52:37

Communication System: WCDMA; Communication System Band: BAND 5;

Frequency: 836.6 MHz; Communication System PAR: 0 dB

Medium parameters used: f = 837 MHz; σ = 0.951 mho/m; ε_r = 54.241; ρ = 1000 kg/m^3

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: ES3DV3 - SN3241; ConvF(6.19, 6.19, 6.19);
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1226; Calibrated: 2011/6/13
- Phantom: SAM1; Type: SAM; Serial: TP1576
- Measurement SW: DASY52, Version 52.2 (0); SEMCAD X Version 14.6.4 (4989)

body/Towards ground - mid with earphone/Area Scan (91x151x1):

Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.875 mW/g

body/Towards ground - mid with earphone/Zoom Scan (7x7x7)/Cube 0:

Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 15.317 V/m; Power Drift = -0.14 dB

Peak SAR (extrapolated) = 1.1090

SAR(1 g) = 0.834 mW/g; SAR(10 g) = 0.609 mW/g

Maximum value of SAR (measured) = 0.882 mW/g
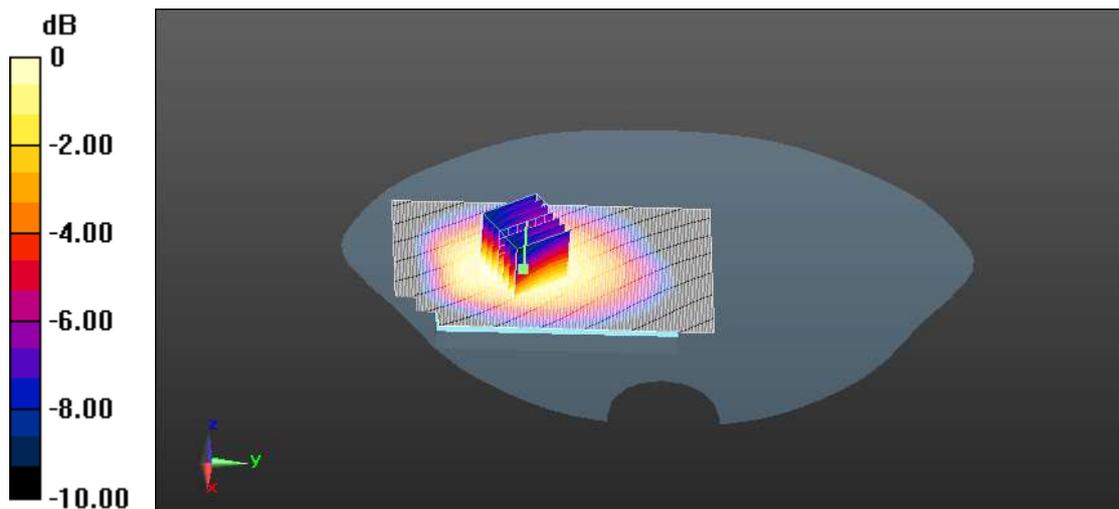
0 dB = 0.880mW/g = -1.11 dB mW/g

WCDMA BAND V Towards ground mid with HSDPA

Date/Time: 2012/4/23 13:30:59

Communication System: WCDMA; Communication System Band: BAND 5;

Frequency: 836.6 MHz; Communication System PAR: 0 dB

Medium parameters used: f = 837 MHz; σ = 0.951 mho/m; ε_r = 54.241; ρ = 1000 kg/m^3

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: ES3DV3 - SN3241; ConvF(6.19, 6.19, 6.19);
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1226; Calibrated: 2011/6/13
- Phantom: SAM1; Type: SAM; Serial: TP1576
- Measurement SW: DASY52, Version 52.2 (0); SEMCAD X Version 14.6.4 (4989)

body/Towards ground - mid with HSDPA/Area Scan (91x151x1):

Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.866 mW/g

**body/Towards ground - mid with HSDPA/Zoom Scan (7x7x7)/Cube 0:**

Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 16.695 V/m; Power Drift = -0.07 dB

Peak SAR (extrapolated) = 1.1050

SAR(1 g) = 0.821 mW/g; SAR(10 g) = 0.595 mW/g

Maximum value of SAR (measured) = 0.867 mW/g

body/Towards ground - mid with HSDPA/Zoom Scan (7x7x7)/Cube 1:

Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 16.695 V/m; Power Drift = -0.07 dB

Peak SAR (extrapolated) = 1.1630

SAR(1 g) = 0.780 mW/g; SAR(10 g) = 0.524 mW/g

Maximum value of SAR (measured) = 0.862 mW/g
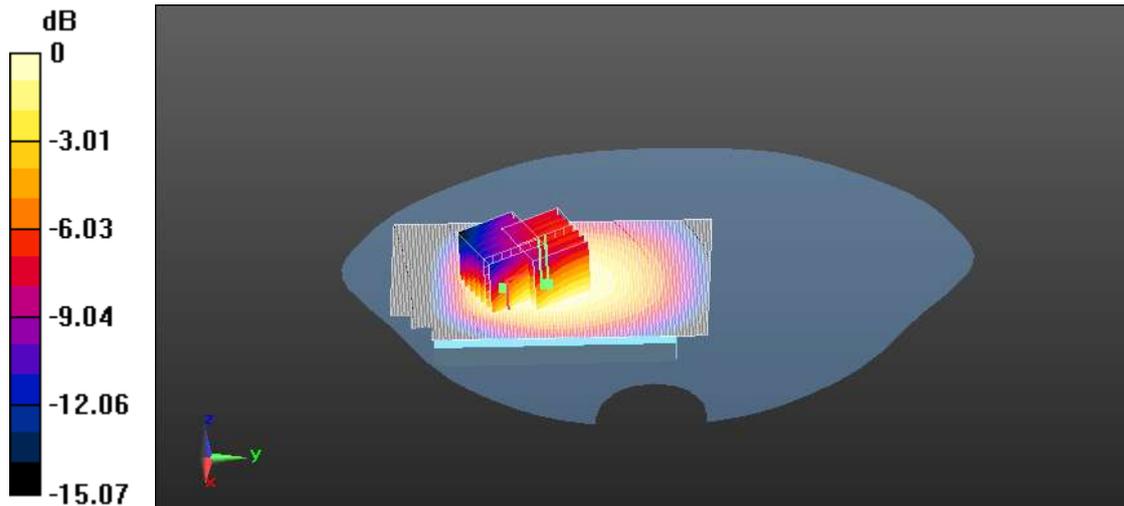
0 dB = 0.860mW/g = -1.31 dB mW/g

Wi-Fi 802.11b Data Rate: 1 Mbps left touch mid

Date/Time: 2012/4/24 21:04:37

Communication System: 802.11b/g wifi 2.45GHz; Communication System Band: 2400-2483.5; Frequency: 2437 MHz; Communication System PAR: 11.132 dB

Medium parameters used: f = 2437 MHz; σ = 1.776 mho/m; ε_r = 37.832; ρ = 1000 kg/m^3

Phantom section: Left Section

Measurement Standard: DASY5 (IEEE1528/OET65c)

DASY5 Configuration:

- Probe: ES3DV3 - SN3241; ConvF(4.45, 4.45, 4.45);
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1226; Calibrated: 2011/6/13
- Phantom: SAM2; Type: SAM; Serial: TP-1575
- Measurement SW: DASY52, Version 52.2 (0); SEMCAD X Version 14.6.4 (4989)

left/Touch Position - mid/Area Scan (91x151x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.332 mW/g

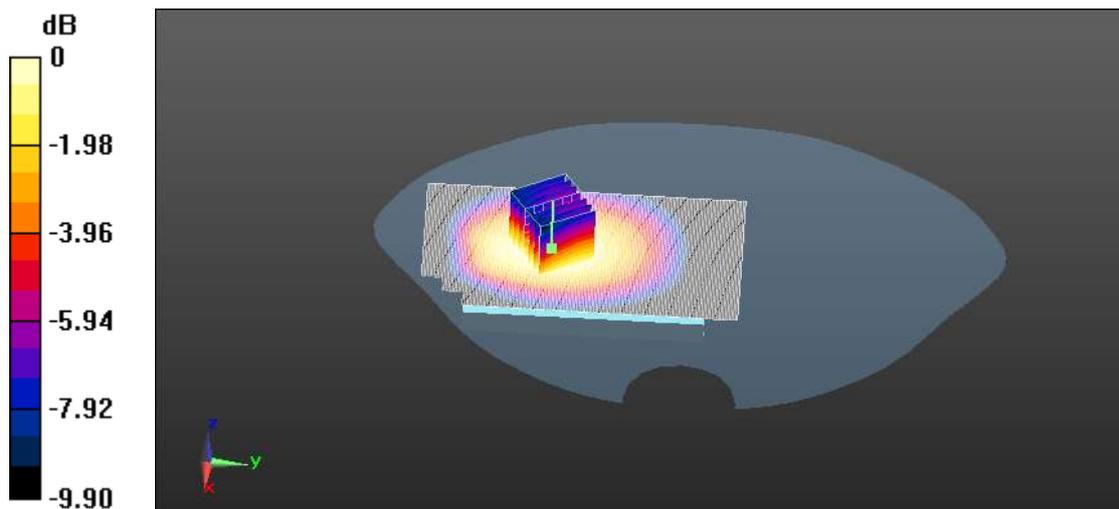**left/Touch Position - mid/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 9.951 V/m; Power Drift = -0.44 dB

Peak SAR (extrapolated) = 0.6660

SAR(1 g) = 0.273 mW/g; SAR(10 g) = 0.130 mW/g

Maximum value of SAR (measured) = 0.294 mW/g
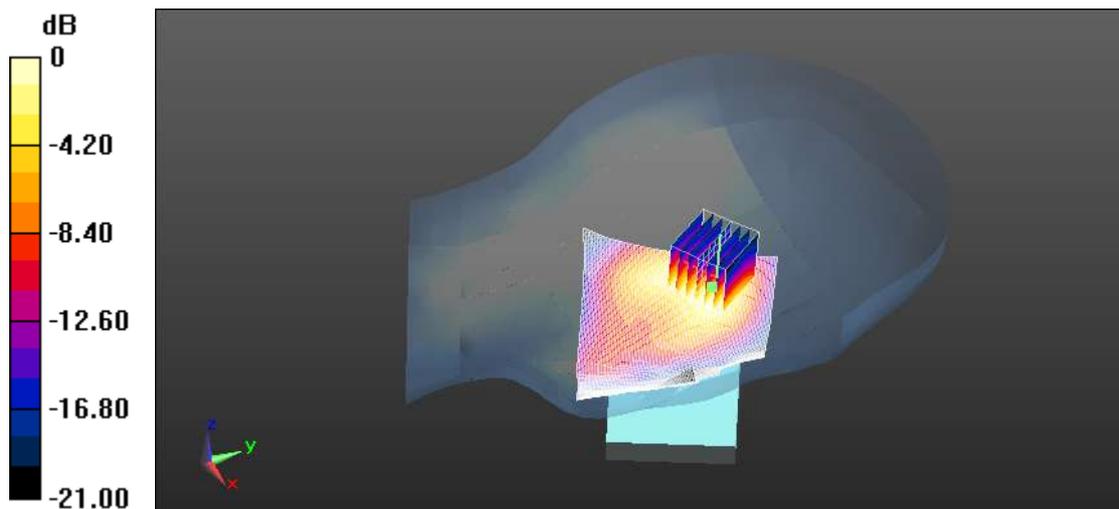
0 dB = 0.290mW/g = -10.75 dB mW/g

Wi-Fi 802.11b Data Rate: 1 Mbps left tilt mid
Date/Time: 2012/4/24 21:36:24
Communication System: 802.11b/g wifi 2.45GHz; Communication System Band:
2400-2483.5; Frequency: 2437 MHz; Communication System PAR: 11.132 dB
Medium parameters used: f = 2437 MHz; σ = 1.776 mho/m; ε_r = 37.832; ρ = 1000
kg/m^3
Phantom section: Left Section
Measurement Standard: DASY5 (IEEE1528/OET65c)
DASY5 Configuration:

- Probe: ES3DV3 - SN3241; ConvF(4.45, 4.45, 4.45);
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1226; Calibrated: 2011/6/13
- Phantom: SAM2; Type: SAM; Serial: TP-1575
- Measurement SW: DASY52, Version 52.2 (0); SEMCAD X Version 14.6.4 (4989)

left/Tilt Position - mid/Area Scan (91x151x1): Measurement grid: dx=10mm,
dy=10mm
Maximum value of SAR (interpolated) = 0.245 mW/g

**left/Tilt Position - mid/Zoom Scan (7x7x7)/Cube 0:** Measurement grid:
dx=5mm, dy=5mm, dz=5mm
Reference Value = 7.860 V/m; Power Drift = 0.26 dB
Peak SAR (extrapolated) = 0.5030
SAR(1 g) = 0.213 mW/g; SAR(10 g) = 0.104 mW/g
Maximum value of SAR (measured) = 0.231 mW/g

left/Tilt Position - mid/Zoom Scan (7x7x7)/Cube 1: Measurement grid:
dx=5mm, dy=5mm, dz=5mm
Reference Value = 7.860 V/m; Power Drift = 0.26 dB
Peak SAR (extrapolated) = 0.5050
SAR(1 g) = 0.208 mW/g; SAR(10 g) = 0.102 mW/g
Maximum value of SAR (measured) = 0.234 mW/g
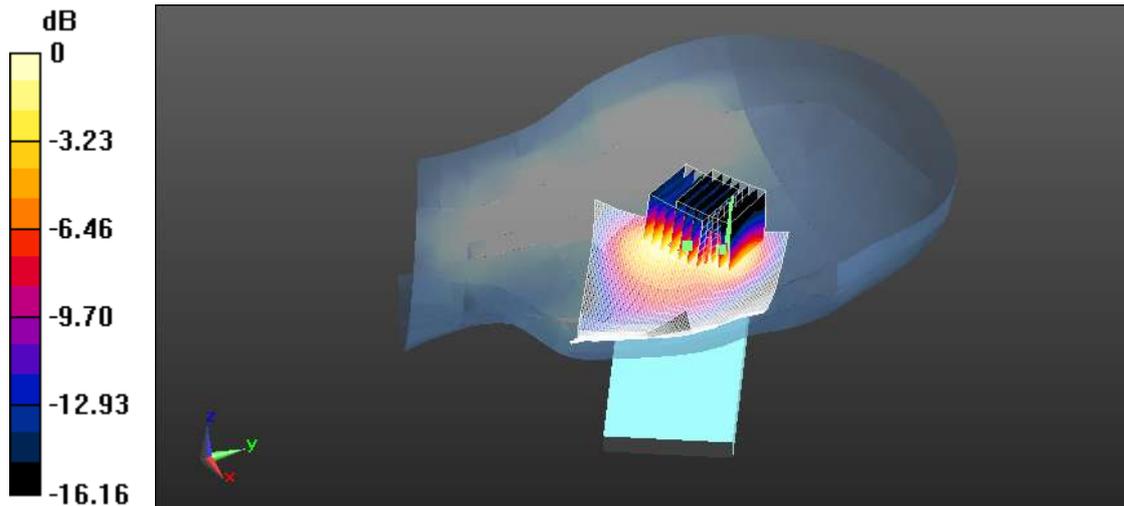
0 dB = 0.230mW/g = -12.77 dB mW/g

Wi-Fi 802.11b Data Rate: 1 Mbps right touch mid

Date/Time: 2012/4/24 20:07:06

Communication System: 802.11b/g wifi 2.45GHz; Communication System Band: 2400-2483.5; Frequency: 2437 MHz; Communication System PAR: 11.132 dB

Medium parameters used: f = 2437 MHz; σ = 1.776 mho/m; ε_r = 37.832; ρ = 1000 kg/m^3

Phantom section: Right Section

Measurement Standard: DASY5 (IEEE1528/OET65c)

DASY5 Configuration:

- Probe: ES3DV3 - SN3241; ConvF(4.45, 4.45, 4.45);
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1226; Calibrated: 2011/6/13
- Phantom: SAM2; Type: SAM; Serial: TP-1575
- Measurement SW: DASY52, Version 52.2 (0); SEMCAD X Version 14.6.4 (4989)

right/Touch Position - mid/Area Scan (91x151x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.225 mW/g

**right/Touch Position - mid/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 10.488 V/m; Power Drift = -0.45 dB

Peak SAR (extrapolated) = 0.4050

SAR(1 g) = 0.204 mW/g; SAR(10 g) = 0.105 mW/g

Maximum value of SAR (measured) = 0.226 mW/g
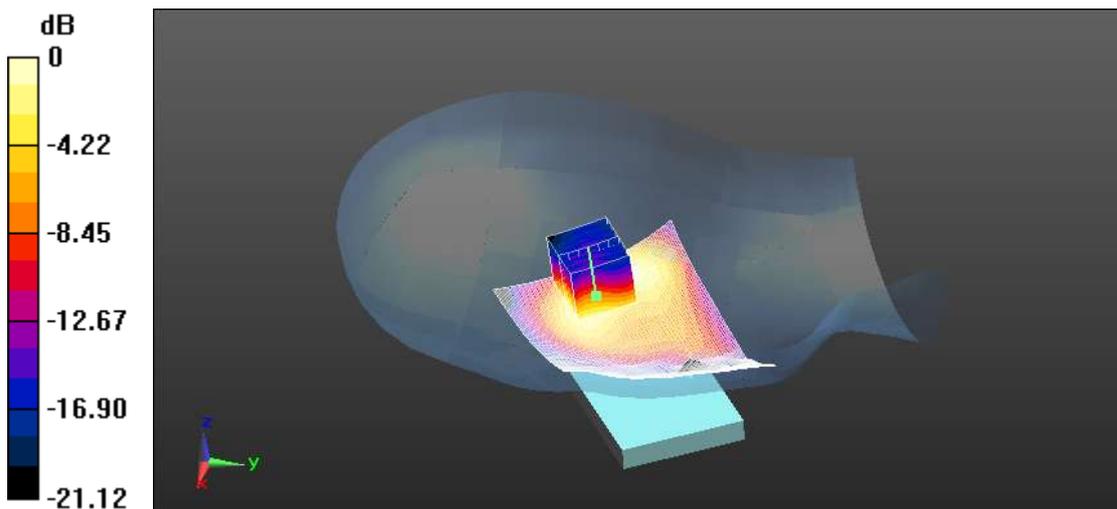
0 dB = 0.230mW/g = -12.77 dB mW/g

Wi-Fi 802.11b Data Rate: 1 Mbps right tilt mid

Date/Time: 2012/4/24 20:35:09

Communication System: 802.11b/g wifi 2.45GHz; Communication System Band: 2400-2483.5; Frequency: 2437 MHz; Communication System PAR: 11.132 dB

Medium parameters used: f = 2437 MHz; σ = 1.776 mho/m; ε_r = 37.832; ρ = 1000 kg/m^3

Phantom section: Right Section

Measurement Standard: DASY5 (IEEE1528/OET65c)

DASY5 Configuration:

- Probe: ES3DV3 - SN3241; ConvF(4.45, 4.45, 4.45);
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1226; Calibrated: 2011/6/13
- Phantom: SAM2; Type: SAM; Serial: TP-1575
- Measurement SW: DASY52, Version 52.2 (0); SEMCAD X Version 14.6.4 (4989)

right/Tilt Position - mid/Area Scan (91x151x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.232 mW/g

**right/Tilt Position - mid/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 9.138 V/m; Power Drift = 0.43 dB

Peak SAR (extrapolated) = 0.4070

SAR(1 g) = 0.207 mW/g; SAR(10 g) = 0.106 mW/g

Maximum value of SAR (measured) = 0.227 mW/g
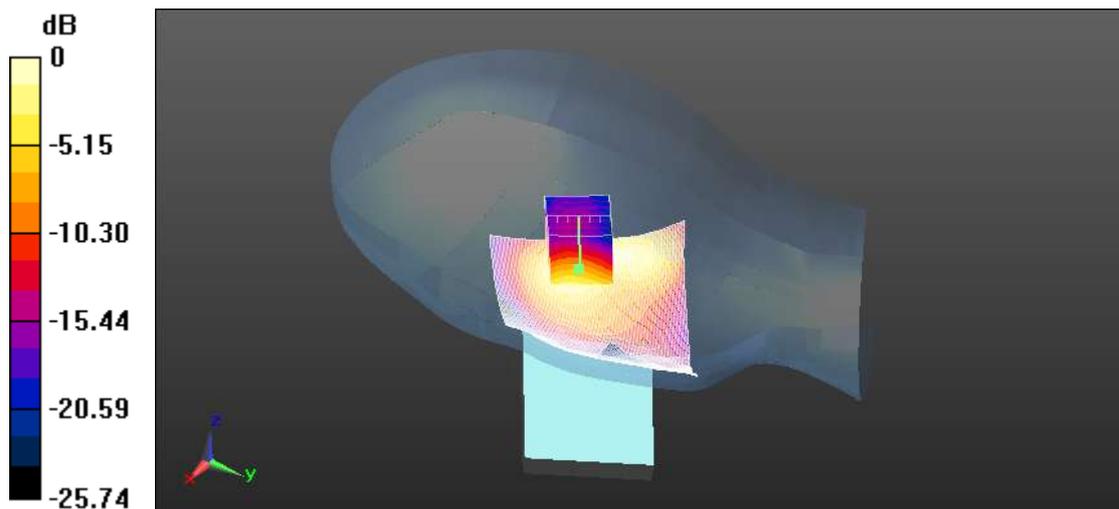
0 dB = 0.230mW/g = -12.77 dB mW/g

Wi-Fi 802.11b Data Rate: 1 Mbps left touch low

Date/Time: 2012/4/24 22:20:43

Communication System: 802.11b/g wifi 2.45GHz; Communication System Band: 2400-2483.5; Frequency: 2412 MHz; Communication System PAR: 11.132 dB

Medium parameters used: f = 2412 MHz; σ = 1.74 mho/m; ε_r = 37.907; ρ = 1000 kg/m^3

Phantom section: Left Section

Measurement Standard: DASY5 (IEEE1528/OET65c)

DASY5 Configuration:

- Probe: ES3DV3 - SN3241; ConvF(4.45, 4.45, 4.45);
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1226; Calibrated: 2011/6/13
- Phantom: SAM2; Type: SAM; Serial: TP-1575
- Measurement SW: DASY52, Version 52.2 (0); SEMCAD X Version 14.6.4 (4989)

left/Touch Position - low/Area Scan (91x151x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.341 mW/g

left/Touch Position - low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 10.191 V/m; Power Drift = 0.0083 dB

Peak SAR (extrapolated) = 0.7450

SAR(1 g) = 0.309 mW/g; SAR(10 g) = 0.147 mW/g

Maximum value of SAR (measured) = 0.331 mW/g
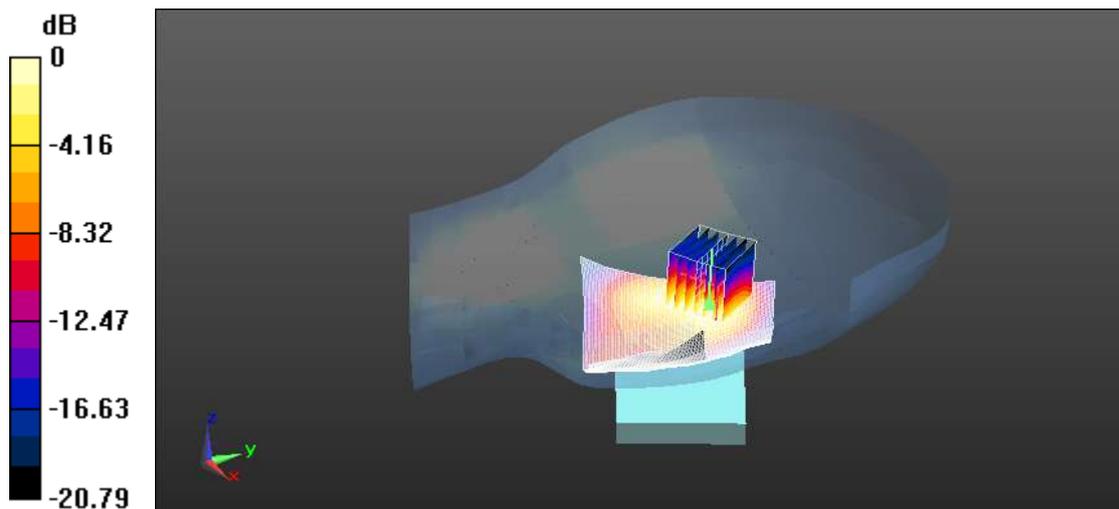
0 dB = 0.330mW/g = -9.63 dB mW/g

Wi-Fi 802.11b Data Rate: 1 Mbps left touch high

Date/Time: 2012/4/24 22:50:57

Communication System: 802.11b/g wifi 2.45GHz; Communication System Band: 2400-2483.5; Frequency: 2462 MHz; Communication System PAR: 11.132 dB

Medium parameters used: f = 2462 MHz; σ = 1.789 mho/m; ε_r = 37.883; ρ = 1000 kg/m^3

Phantom section: Left Section

Measurement Standard: DASY5 (IEEE1528/OET65c)

DASY5 Configuration:

- Probe: ES3DV3 - SN3241; ConvF(4.45, 4.45, 4.45);
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1226; Calibrated: 2011/6/13
- Phantom: SAM2; Type: SAM; Serial: TP-1575
- Measurement SW: DASY52, Version 52.2 (0); SEMCAD X Version 14.6.4 (4989)

left/Touch Position - high/Area Scan (91x151x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.364 mW/g

left/Touch Position - high/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 10.229 V/m; Power Drift = 0.13 dB

Peak SAR (extrapolated) = 0.7910

SAR(1 g) = 0.329 mW/g; SAR(10 g) = 0.156 mW/g

Maximum value of SAR (measured) = 0.356 mW/g

0 dB = 0.360mW/g = -8.87 dB mW/g

Interpolated Max SAR Z Line(z)

Touch Position - high;Zoom Scan;SAR;cube 0   Markers
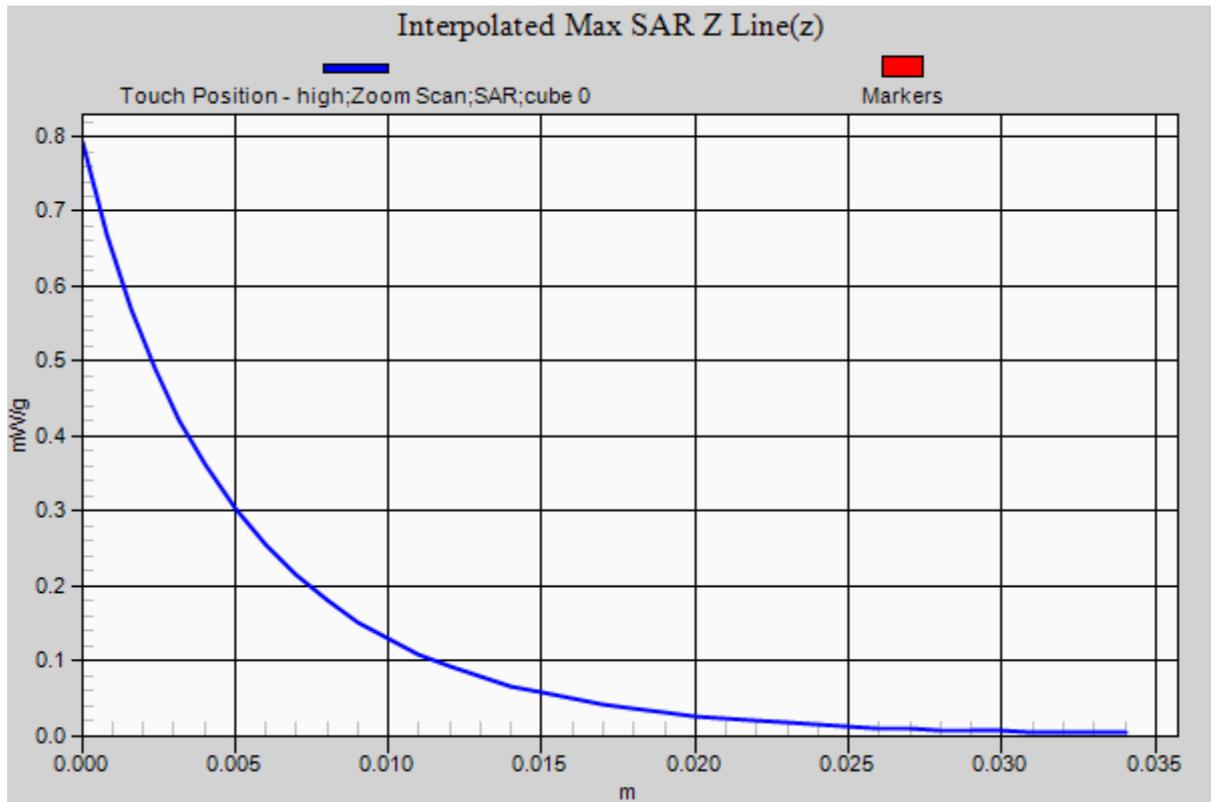
Wi-Fi 802.11g Data Rate: 6 Mbps left touch high

Date/Time: 2012/4/24 23:19:36

Communication System: 802.11b/g wifi 2.45GHz; Communication System Band: 2400-2483.5; Frequency: 2462 MHz; Communication System PAR: 11.132 dB

Medium parameters used: f = 2462 MHz; σ = 1.789 mho/m; ε_r = 37.883; ρ = 1000 kg/m^3

Phantom section: Left Section

Measurement Standard: DASY5 (IEEE1528/OET65c)

DASY5 Configuration:

- Probe: ES3DV3 - SN3241; ConvF(4.45, 4.45, 4.45);
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1226; Calibrated: 2011/6/13
- Phantom: SAM2; Type: SAM; Serial: TP-1575
- Measurement SW: DASY52, Version 52.2 (0); SEMCAD X Version 14.6.4 (4989)

left/Touch Position - high g/Area Scan (91x151x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.356 mW/g

**left/Touch Position - high g/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 10.307 V/m; Power Drift = 0.03 dB

Peak SAR (extrapolated) = 0.7720

SAR(1 g) = 0.322 mW/g; SAR(10 g) = 0.154 mW/g

Maximum value of SAR (measured) = 0.349 mW/g

left/Touch Position - high g/Zoom Scan (7x7x7)/Cube 1: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 10.307 V/m; Power Drift = 0.03 dB

Peak SAR (extrapolated) = 0.7680

SAR(1 g) = 0.286 mW/g; SAR(10 g) = 0.139 mW/g

Maximum value of SAR (measured) = 0.355 mW/g
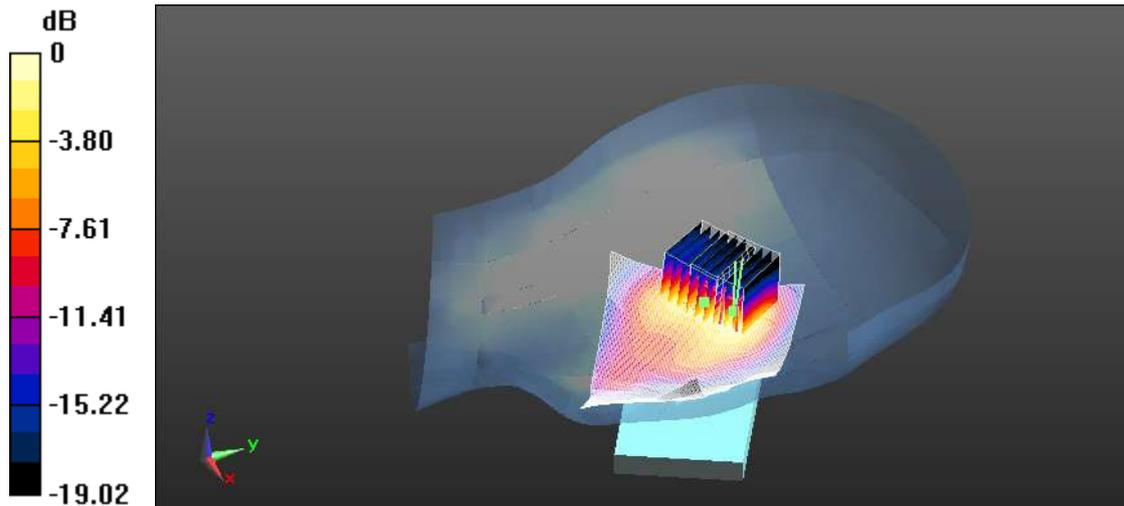
0 dB = 0.360mW/g = -8.87 dB mW/g

Wi-Fi 802.11n Data Rate: 6.5 Mbps left touch high

Date/Time: 2012/4/25 0:02:29

Communication System: 802.11b/g wifi 2.45GHz; Communication System Band: 2400-2483.5; Frequency: 2462 MHz; Communication System PAR: 11.132 dB

Medium parameters used: f = 2462 MHz; σ = 1.789 mho/m; ε_r = 37.883; ρ = 1000 kg/m^3

Phantom section: Left Section

Measurement Standard: DASY5 (IEEE1528/OET65c)

DASY5 Configuration:

- Probe: ES3DV3 - SN3241; ConvF(4.45, 4.45, 4.45);
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1226; Calibrated: 2011/6/13
- Phantom: SAM2; Type: SAM; Serial: TP-1575
- Measurement SW: DASY52, Version 52.2 (0); SEMCAD X Version 14.6.4 (4989)

left/Touch Position - high n/Area Scan (91x151x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.357 mW/g

**left/Touch Position - high n/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 10.340 V/m; Power Drift = -0.0066 dB

Peak SAR (extrapolated) = 0.7470

SAR(1 g) = 0.315 mW/g; SAR(10 g) = 0.151 mW/g

Maximum value of SAR (measured) = 0.343 mW/g

left/Touch Position - high n/Zoom Scan (7x7x7)/Cube 1: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 10.340 V/m; Power Drift = -0.0066 dB

Peak SAR (extrapolated) = 0.7410

SAR(1 g) = 0.282 mW/g; SAR(10 g) = 0.137 mW/g

Maximum value of SAR (measured) = 0.349 mW/g
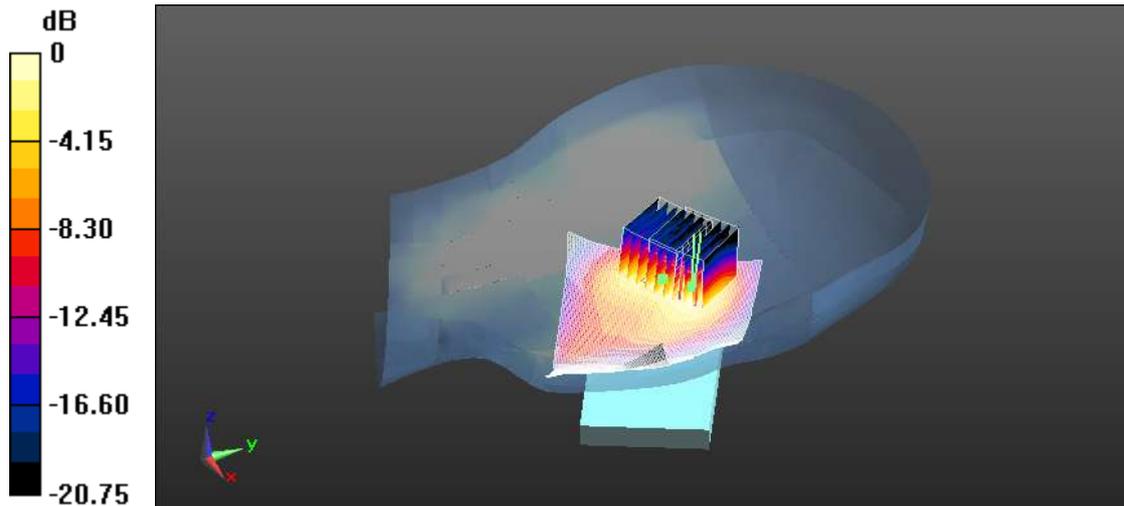
0 dB = 0.350mW/g = -9.12 dB mW/g

Wi-Fi 802.11b Data Rate: 1 Mbps Towards phantom - mid

Date/Time: 2012/4/24 12:16:05

Communication System: 802.11b/g wifi 2.45GHz; Communication System Band: 2400-2483.5; Frequency: 2437 MHz; Communication System PAR: 11.132 dB

Medium parameters used: f = 2437 MHz; σ = 1.906 mho/m; ε_r = 51.957; ρ = 1000 kg/m^3

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE1528/OET65c)

DASY5 Configuration:

- Probe: ES3DV3 - SN3241; ConvF(4.29, 4.29, 4.29);
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1226; Calibrated: 2011/6/13
- Phantom: SAM2; Type: SAM; Serial: TP-1575
- Measurement SW: DASY52, Version 52.2 (0); SEMCAD X Version 14.6.4 (4989)

body/Towards phantom - mid/Area Scan (91x151x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.117 mW/g

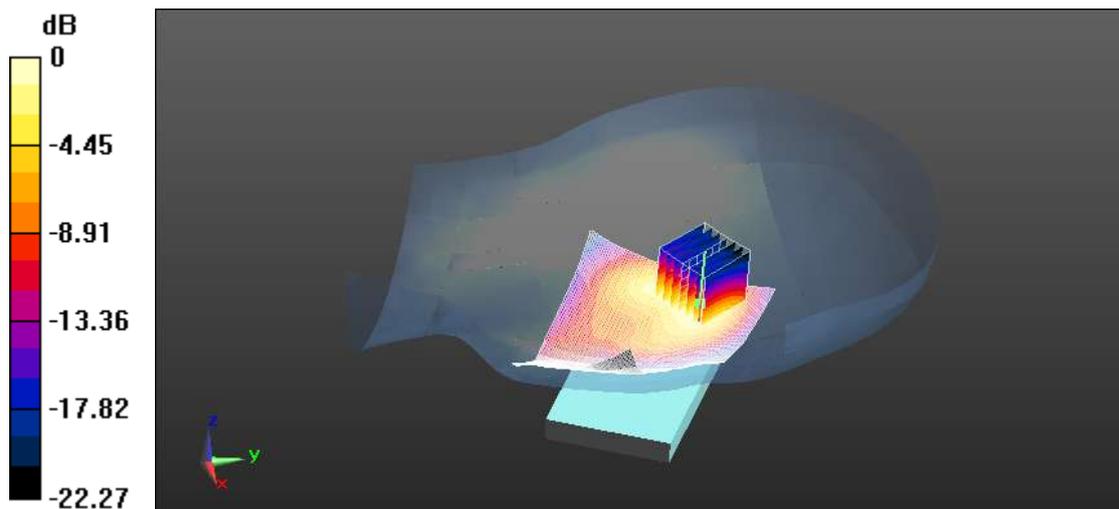**body/Towards phantom - mid/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 5.518 V/m; Power Drift = 0.44 dB

Peak SAR (extrapolated) = 0.2490

SAR(1 g) = 0.112 mW/g; SAR(10 g) = 0.052 mW/g

Maximum value of SAR (measured) = 0.128 mW/g

body/Towards phantom - mid/Zoom Scan (7x7x7)/Cube 1: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 5.518 V/m; Power Drift = 0.44 dB

Peak SAR (extrapolated) = 0.1470

SAR(1 g) = 0.082 mW/g; SAR(10 g) = 0.047 mW/g

Maximum value of SAR (measured) = 0.089 mW/g
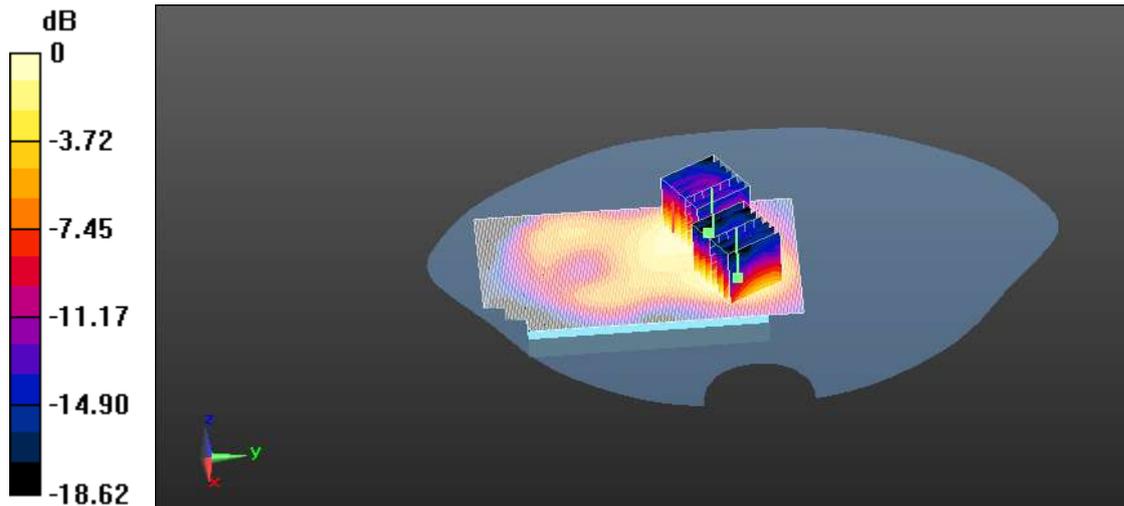
0 dB = 0.090mW/g = -20.92 dB mW/g

Wi-Fi 802.11b Data Rate: 1 Mbps Towards ground - mid

Date/Time: 2012/4/24 13:00:30

Communication System: 802.11b/g wifi 2.45GHz; Communication System Band: 2400-2483.5; Frequency: 2437 MHz; Communication System PAR: 11.132 dB

Medium parameters used: f = 2437 MHz; σ = 1.906 mho/m; ε_r = 51.957; ρ = 1000 kg/m^3

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE1528/OET65c)

DASY5 Configuration:

- Probe: ES3DV3 - SN3241; ConvF(4.29, 4.29, 4.29);
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1226; Calibrated: 2011/6/13
- Phantom: SAM2; Type: SAM; Serial: TP-1575
- Measurement SW: DASY52, Version 52.2 (0); SEMCAD X Version 14.6.4 (4989)

body/Towards ground - mid/Area Scan (91x151x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.139 mW/g

body/Towards ground - mid/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 6.529 V/m; Power Drift = -0.16 dB

Peak SAR (extrapolated) = 0.2150

SAR(1 g) = 0.116 mW/g; SAR(10 g) = 0.063 mW/g

Maximum value of SAR (measured) = 0.128 mW/g

**body/Towards ground - mid/Zoom Scan (7x7x7)/Cube 1:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 6.529 V/m; Power Drift = -0.16 dB

Peak SAR (extrapolated) = 0.2360

SAR(1 g) = 0.102 mW/g; SAR(10 g) = 0.046 mW/g

Maximum value of SAR (measured) = 0.119 mW/g
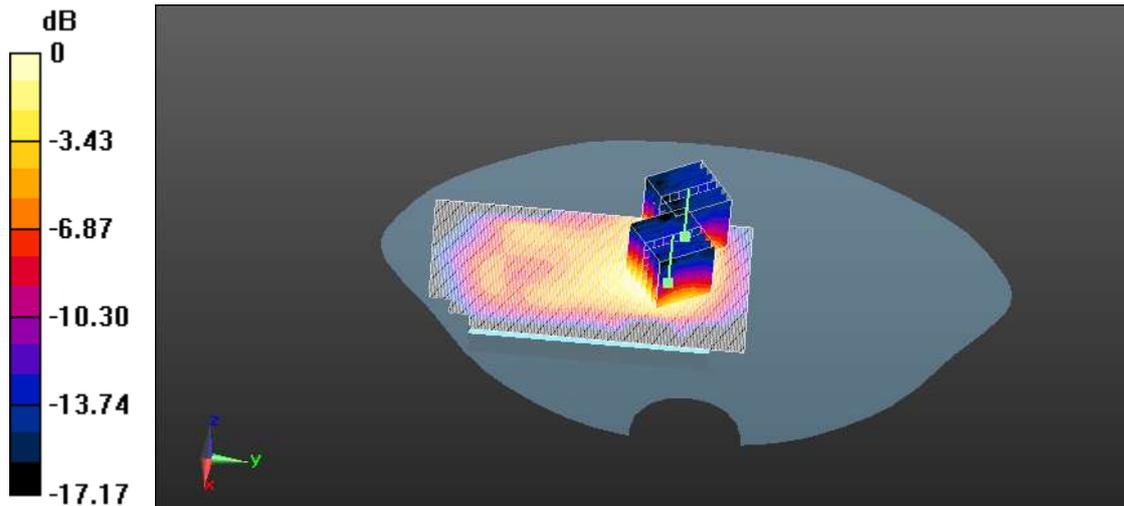
0 dB = 0.120mW/g = -18.42 dB mW/g

Wi-Fi 802.11b Data Rate: 1 Mbps back- mid

Date/Time: 2012/4/24 14:54:40

Communication System: 802.11b/g wifi 2.45GHz; Communication System Band: 2400-2483.5; Frequency: 2437 MHz; Communication System PAR: 11.132 dB

Medium parameters used: f = 2437 MHz; σ = 1.906 mho/m; ε_r = 51.957; ρ = 1000 kg/m^3

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE1528/OET65c)

DASY5 Configuration:

- Probe: ES3DV3 - SN3241; ConvF(4.29, 4.29, 4.29);
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1226; Calibrated: 2011/6/13
- Phantom: SAM2; Type: SAM; Serial: TP-1575
- Measurement SW: DASY52, Version 52.2 (0); SEMCAD X Version 14.6.4 (4989)

body/Towards back- mid/Area Scan (61x91x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.014 mW/g

**body/Towards back- mid/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 2.039 V/m; Power Drift = 0.42 dB

Peak SAR (extrapolated) = 0.0220

SAR(1 g) = 0.012 mW/g; SAR(10 g) = 0.00613 mW/g

Maximum value of SAR (measured) = 0.013 mW/g
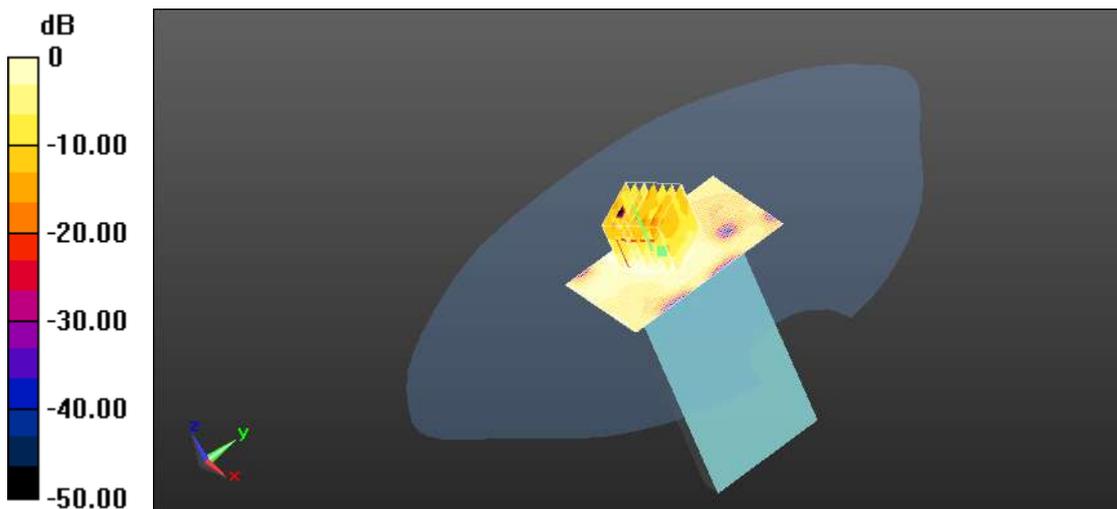
0 dB = 0.010mW/g = -40.00 dB mW/g

Wi-Fi 802.11b Data Rate: 1 Mbps left side - mid

Date/Time: 2012/4/24 13:43:30

Communication System: 802.11b/g wifi 2.45GHz; Communication System Band: 2400-2483.5; Frequency: 2437 MHz; Communication System PAR: 11.132 dB

Medium parameters used: f = 2437 MHz; σ = 1.906 mho/m; ε_r = 51.957; ρ = 1000 kg/m^3

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE1528/OET65c)

DASY5 Configuration:

- Probe: ES3DV3 - SN3241; ConvF(4.29, 4.29, 4.29);
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1226; Calibrated: 2011/6/13
- Phantom: SAM2; Type: SAM; Serial: TP-1575
- Measurement SW: DASY52, Version 52.2 (0); SEMCAD X Version 14.6.4 (4989)

body2/left side - mid/Area Scan (61x151x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.044 mW/g

body2/left side - mid/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 3.547 V/m; Power Drift = 0.13 dB

Peak SAR (extrapolated) = 0.0780

SAR(1 g) = 0.035 mW/g; SAR(10 g) = 0.015 mW/g

Maximum value of SAR (measured) = 0.045 mW/g

body2/left side - mid/Zoom Scan (7x7x7)/Cube 1: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 3.547 V/m; Power Drift = 0.13 dB

Peak SAR (extrapolated) = 0.0540

SAR(1 g) = 0.027 mW/g; SAR(10 g) = 0.013 mW/g

Maximum value of SAR (measured) = 0.030 mW/g
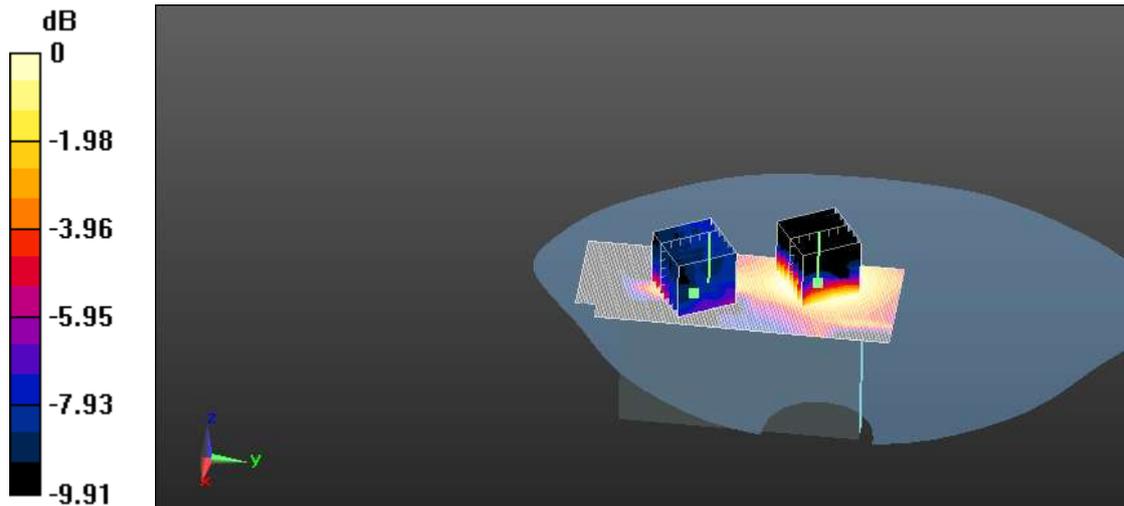
0 dB = 0.030mW/g = -30.46 dB mW/g

Wi-Fi 802.11b Data Rate: 1 Mbps right side - mid

Date/Time: 2012/4/24 14:26:49

Communication System: 802.11b/g wifi 2.45GHz; Communication System Band: 2400-2483.5; Frequency: 2437 MHz; Communication System PAR: 11.132 dB

Medium parameters used: f = 2437 MHz; σ = 1.906 mho/m; ε_r = 51.957; ρ = 1000 kg/m^3

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE1528/OET65c)

DASY5 Configuration:

- Probe: ES3DV3 - SN3241; ConvF(4.29, 4.29, 4.29);
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1226; Calibrated: 2011/6/13
- Phantom: SAM2; Type: SAM; Serial: TP-1575
- Measurement SW: DASY52, Version 52.2 (0); SEMCAD X Version 14.6.4 (4989)

body2/right side - mid/Area Scan (61x151x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.106 mW/g

body2/right side - mid/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 5.522 V/m; Power Drift = 0.30 dB

Peak SAR (extrapolated) = 0.1850

SAR(1 g) = 0.093 mW/g; SAR(10 g) = 0.047 mW/g

Maximum value of SAR (measured) = 0.103 mW/g
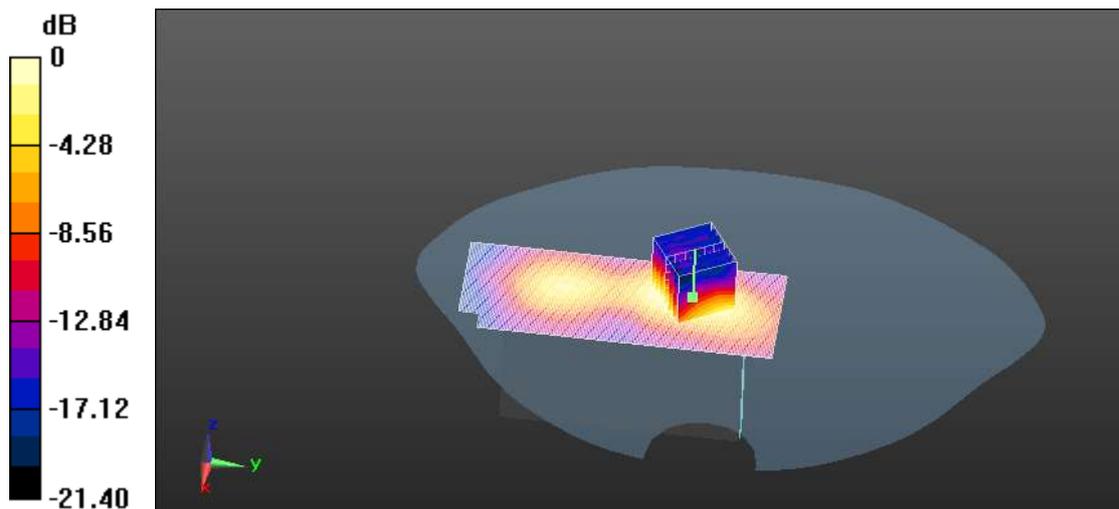
0 dB = 0.100mW/g = -20.00 dB mW/g

Wi-Fi 802.11b Data Rate: 1 Mbps Towards ground - low
Date/Time: 2012/4/24 15:24:50
Communication System: 802.11b/g wifi 2.45GHz; Communication System Band: 2400-2483.5; Frequency: 2412 MHz; Communication System PAR: 11.132 dB
Medium parameters used: f = 2412 MHz; σ = 1.874 mho/m; ε_r = 51.963; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE1528/OET65c)
DASY5 Configuration:

- Probe: ES3DV3 - SN3241; ConvF(4.29, 4.29, 4.29);
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1226; Calibrated: 2011/6/13
- Phantom: SAM2; Type: SAM; Serial: TP-1575
- Measurement SW: DASY52, Version 52.2 (0); SEMCAD X Version 14.6.4 (4989)

body/Towards ground - low/Area Scan (91x151x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.149 mW/g

body/Towards ground - low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 6.134 V/m; Power Drift = 0.92 dB
Peak SAR (extrapolated) = 0.2990
SAR(1 g) = 0.131 mW/g; SAR(10 g) = 0.060 mW/g
Maximum value of SAR (measured) = 0.147 mW/g

body/Towards ground - low/Zoom Scan (7x7x7)/Cube 1: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 6.134 V/m; Power Drift = 0.92 dB
Peak SAR (extrapolated) = 0.2410
SAR(1 g) = 0.130 mW/g; SAR(10 g) = 0.069 mW/g
Maximum value of SAR (measured) = 0.142 mW/g
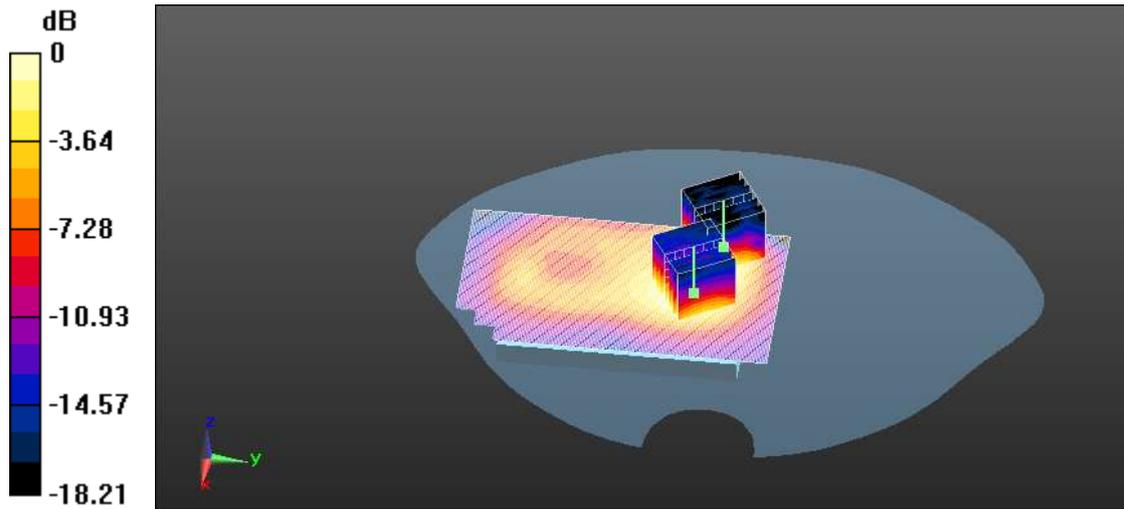
0 dB = 0.140mW/g = -17.08 dB mW/g

Wi-Fi 802.11b Data Rate: 1 Mbps Towards ground - high

Date/Time: 2012/4/24 16:08:01

Communication System: 802.11b/g wifi 2.45GHz; Communication System Band: 2400-2483.5; Frequency: 2462 MHz; Communication System PAR: 11.132 dB

Medium parameters used: f = 2462 MHz; σ = 1.934 mho/m; ε_r = 51.886; ρ = 1000 kg/m^3

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE1528/OET65c)

DASY5 Configuration:

- Probe: ES3DV3 - SN3241; ConvF(4.29, 4.29, 4.29);
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1226; Calibrated: 2011/6/13
- Phantom: SAM2; Type: SAM; Serial: TP-1575
- Measurement SW: DASY52, Version 52.2 (0); SEMCAD X Version 14.6.4 (4989)

body/Towards ground - high/Area Scan (91x151x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.159 mW/g

**body/Towards ground - high/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 6.045 V/m; Power Drift = 0.08 dB

Peak SAR (extrapolated) = 0.3070

SAR(1 g) = 0.134 mW/g; SAR(10 g) = 0.063 mW/g

Maximum value of SAR (measured) = 0.150 mW/g

body/Towards ground - high/Zoom Scan (7x7x7)/Cube 1: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 6.045 V/m; Power Drift = 0.08 dB

Peak SAR (extrapolated) = 0.1920

SAR(1 g) = 0.104 mW/g; SAR(10 g) = 0.057 mW/g

Maximum value of SAR (measured) = 0.114 mW/g
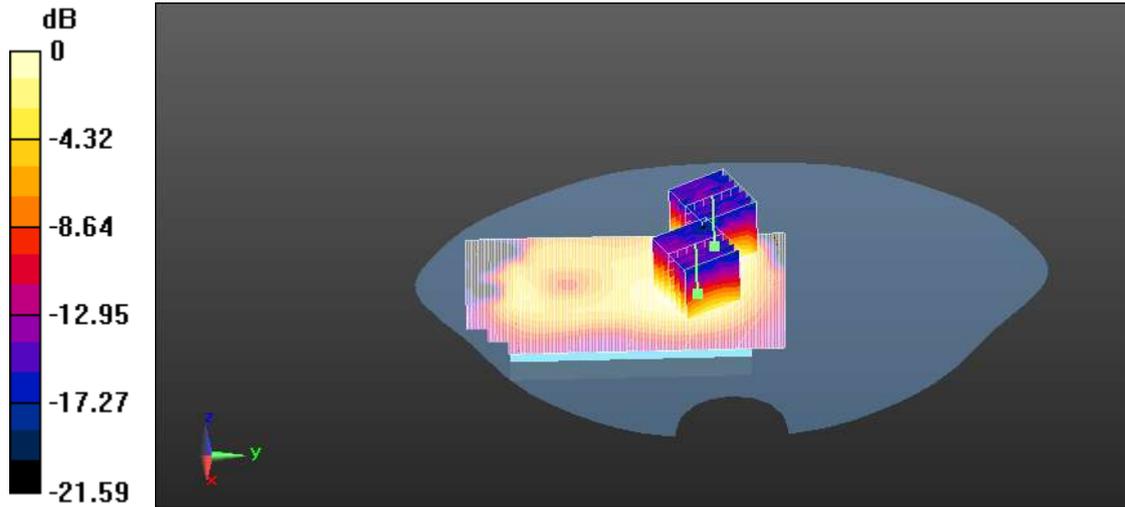
0 dB = 0.110mW/g = -19.17 dB mW/g
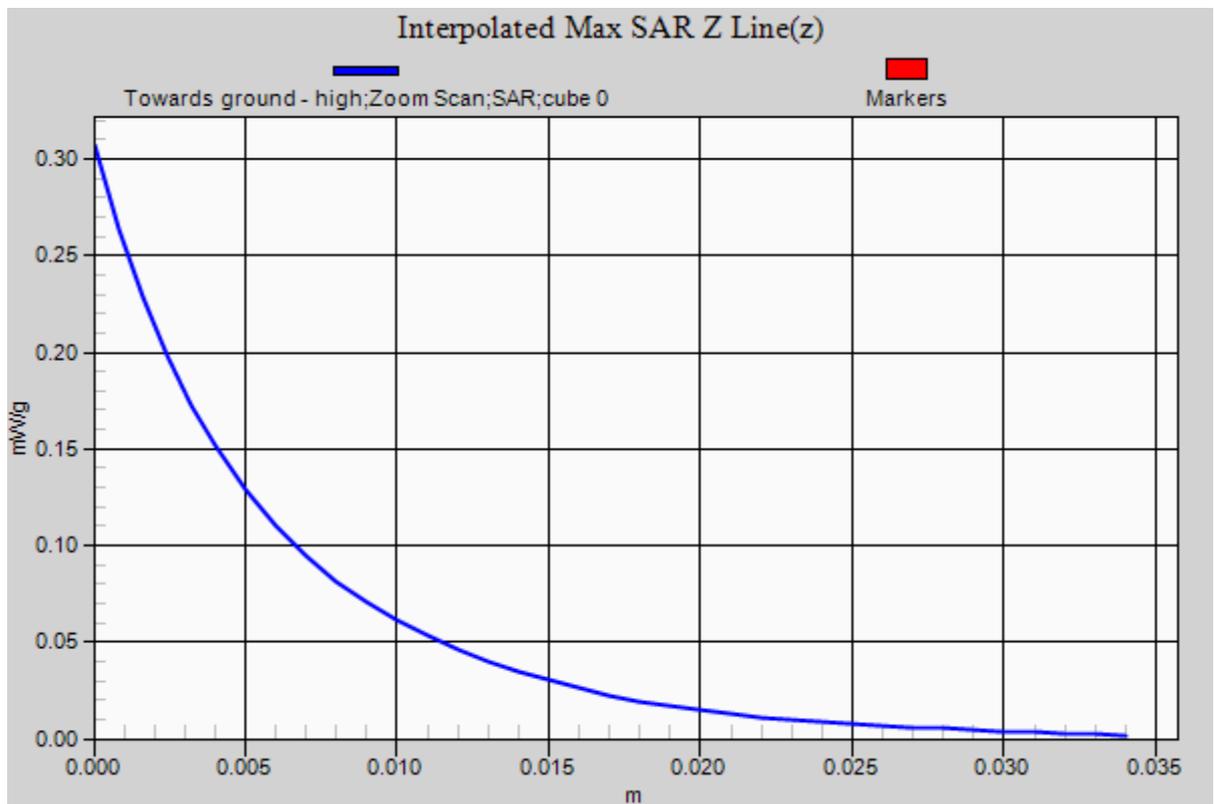
Wi-Fi 802.11g Data Rate: 6 Mbps Towards ground - high

Date/Time: 2012/4/24 16:57:53

Communication System: 802.11b/g wifi 2.45GHz; Communication System Band: 2400-2483.5; Frequency: 2462 MHz; Communication System PAR: 11.132 dB

Medium parameters used: f = 2462 MHz; σ = 1.934 mho/m; ε_r = 51.886; ρ = 1000 kg/m^3

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE1528/OET65c)

DASY5 Configuration:

- Probe: ES3DV3 - SN3241; ConvF(4.29, 4.29, 4.29);
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1226; Calibrated: 2011/6/13
- Phantom: SAM2; Type: SAM; Serial: TP-1575
- Measurement SW: DASY52, Version 52.2 (0); SEMCAD X Version 14.6.4 (4989)

body/Towards ground - high with g/Area Scan (91x151x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.067 mW/g

body/Towards ground - high with g/Zoom Scan (7x7x7)/Cube 0:

Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 4.523 V/m; Power Drift = 0.23 dB

Peak SAR (extrapolated) = 0.1180

SAR(1 g) = 0.062 mW/g; SAR(10 g) = 0.034 mW/g

Maximum value of SAR (measured) = 0.067 mW/g

body/Towards ground - high with g/Zoom Scan (7x7x7)/Cube 1:

Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 4.523 V/m; Power Drift = 0.23 dB

Peak SAR (extrapolated) = 0.1330

SAR(1 g) = 0.058 mW/g; SAR(10 g) = 0.027 mW/g

Maximum value of SAR (measured) = 0.064 mW/g
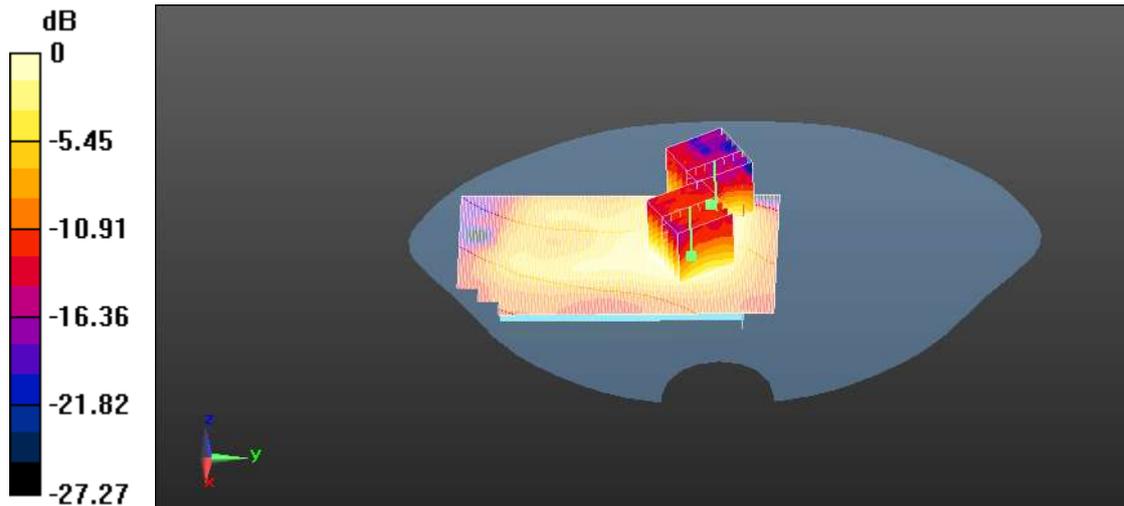
0 dB = 0.060mW/g = -24.44 dB mW/g

Wi-Fi 802.11n Data Rate: 6.5 Mbps Towards ground - high

Date/Time: 2012/4/24 17:44:34

Communication System: 802.11b/g wifi 2.45GHz; Communication System Band: 2400-2483.5; Frequency: 2462 MHz; Communication System PAR: 11.132 dB

Medium parameters used: f = 2462 MHz; σ = 1.934 mho/m; ε_r = 51.886; ρ = 1000 kg/m^3

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE1528/OET65c)

DASY5 Configuration:

- Probe: ES3DV3 - SN3241; ConvF(4.29, 4.29, 4.29);
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1226; Calibrated: 2011/6/13
- Phantom: SAM2; Type: SAM; Serial: TP-1575
- Measurement SW: DASY52, Version 52.2 (0); SEMCAD X Version 14.6.4 (4989)

body/Towards ground - high with n/Area Scan (91x151x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.089 mW/g

body/Towards ground - high with n/Zoom Scan (7x7x7)/Cube 0:

Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 4.614 V/m; Power Drift = 0.32 dB

Peak SAR (extrapolated) = 0.1370

SAR(1 g) = 0.069 mW/g; SAR(10 g) = 0.032 mW/g

Maximum value of SAR (measured) = 0.087 mW/g

**body/Towards ground - high with n/Zoom Scan (7x7x7)/Cube 1:**

Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 4.614 V/m; Power Drift = 0.32 dB

Peak SAR (extrapolated) = 0.1220

SAR(1 g) = 0.068 mW/g; SAR(10 g) = 0.037 mW/g

Maximum value of SAR (measured) = 0.074 mW/g
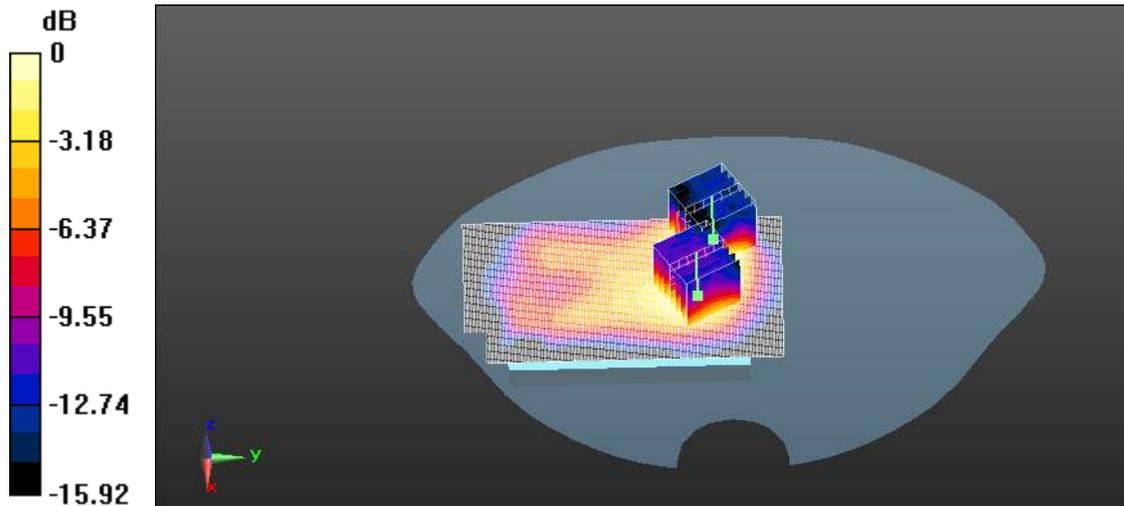
0 dB = 0.070mW/g = -23.10 dB mW/g

ANNEX G: Probe Calibration Certificate

Calibration Laboratory of
Schmid & Partner
Engineering AG
Zeughausstrasse 43, 8004 Zurich, Switzerland

ilac-MRA

SWISS CALIBRATION

S Schweizerischer Kalibrierdienst
C Service suisse d'étalonnage
Servizio svizzero di taratura
S Swiss Calibration Service

Accredited by the Swiss Accreditation Service (SAS)
The Swiss Accreditation Service is one of the signatories to the EA
Multilateral Agreement for the recognition of calibration certificates

Accreditation No.: **SCS 108**

Client   **ZTE Shanghai (Auden)**

Certificate No: **ES3-3241_Sep11**

CALIBRATION CERTIFICATE

Object	ES3DV3 - SN:3241
Calibration procedure(s)	QA CAL-01.v8, QA CAL-23.v4, QA CAL-25.v4 Calibration procedure for dosimetric E-field probes
Calibration date:	September 27, 2011

This calibration certificate documents the traceability to national standards, which realize the physical units of measurements (SI). The measurements and the uncertainties with confidence probability are given on the following pages and are part of the certificate.

All calibrations have been conducted in the closed laboratory facility: environment temperature (22 ± 3)°C and humidity < 70%.

Calibration Equipment used (M&TE critical for calibration)

Primary Standards	ID	Cal Date (Certificate No.)	Scheduled Calibration
Power meter E4419B	GB41293874	31-Mar-11 (No. 217-01372)	Apr-12
Power sensor E4412A	MY41498087	31-Mar-11 (No. 217-01372)	Apr-12
Reference 3 dB Attenuator	SN: S5054 (3c)	29-Mar-11 (No. 217-01369)	Apr-12
Reference 20 dB Attenuator	SN: S5086 (20b)	29-Mar-11 (No. 217-01367)	Apr-12
Reference 30 dB Attenuator	SN: S5129 (30b)	29-Mar-11 (No. 217-01370)	Apr-12
Reference Probe ES3DV2	SN: 3013	29-Dec-10 (No. ES3-3013_Dec10)	Dec-11
DAE4	SN: 654	3-May-11 (No. DAE4-654_May11)	May-12

Secondary Standards	ID	Check Date (in house)	Scheduled Check
RF generator HP 8648C	US3642U01700	4-Aug-99 (in house check Oct-09)	In house check: Oct-11
Network Analyzer HP 8753E	US37390585	18-Oct-01 (in house check Oct-10)	In house check: Oct-11

	Name	Function	Signature
Calibrated by:	Claudio Leubler	Laboratory Technician	
Approved by:	Katja Pokovic	Technical Manager	

Issued: September 28, 2011

This calibration certificate shall not be reproduced except in full without written approval of the laboratory.

Certificate No: ES3-3241_Sep11   Page 1 of 11

Calibration Laboratory of
Schmid & Partner
Engineering AG
Zeughausstrasse 43, 8004 Zurich, Switzerland

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SWISS CALIBRATION

S Schweizerischer Kalibrierdienst
C Service suisse d'étalonnage
S Servizio svizzero di taratura
S Swiss Calibration Service

Accredited by the Swiss Accreditation Service (SAS)

Accreditation No.: **SCS 108**

The Swiss Accreditation Service is one of the signatories to the EA
Multilateral Agreement for the recognition of calibration certificates

Glossary:

TSL	tissue simulating liquid
NORMx,y,z	sensitivity in free space
ConvF	sensitivity in TSL / NORMx,y,z
DCP	diode compression point
CF	crest factor (1/duty_cycle) of the RF signal
A, B, C	modulation dependent linearization parameters
Polarization φ	φ rotation around probe axis
Polarization ϑ	ϑ rotation around an axis that is in the plane normal to probe axis (at measurement center), i.e., ϑ = 0 is normal to probe axis

Calibration is Performed According to the Following Standards:

a) IEEE Std 1528-2003, "IEEE Recommended Practice for Determining the Peak Spatial-Averaged Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques", December 2003

b) IEC 62209-1, "Procedure to measure the Specific Absorption Rate (SAR) for hand-held devices used in close proximity to the ear (frequency range of 300 MHz to 3 GHz)", February 2005

Methods Applied and Interpretation of Parameters:

- *NORMx,y,z*: Assessed for E-field polarization ϑ = 0 (f ≤ 900 MHz in TEM-cell; f > 1800 MHz: R22 waveguide). NORMx,y,z are only intermediate values, i.e., the uncertainties of NORMx,y,z does not affect the E^2-field uncertainty inside TSL (see below ConvF).

- *NORM(f)x,y,z = NORMx,y,z * frequency_response* (see Frequency Response Chart). This linearization is implemented in DASY4 software versions later than 4.2. The uncertainty of the frequency response is included in the stated uncertainty of *ConvF*.

- *DCPx,y,z*: DCP are numerical linearization parameters assessed based on the data of power sweep with CW signal (no uncertainty required). DCP does not depend on frequency nor media.

- *PAR*: PAR is the Peak to Average Ratio that is not calibrated but determined based on the signal characteristics

- *Ax,y,z; Bx,y,z; Cx,y,z; VRx,y,z*: A, B, C are numerical linearization parameters assessed based on the data of power sweep for specific modulation signal. The parameters do not depend on frequency nor media. *VR* is the maximum calibration range expressed in RMS voltage across the diode.

- *ConvF and Boundary Effect Parameters*: Assessed in flat phantom using E-field (or Temperature Transfer Standard for f ≤ 800 MHz) and inside waveguide using analytical field distributions based on power measurements for f > 800 MHz. The same setups are used for assessment of the parameters applied for boundary compensation (alpha, depth) of which typical uncertainty values are given. These parameters are used in DASY4 software to improve probe accuracy close to the boundary. The sensitivity in TSL corresponds to *NORMx,y,z * ConvF* whereby the uncertainty corresponds to that given for *ConvF*. A frequency dependent ConvF is used in DASY version 4.4 and higher which allows extending the validity from ± 50 MHz to ± 100 MHz.

- *Spherical isotropy (3D deviation from isotropy)*: in a field of low gradients realized using a flat phantom exposed by a patch antenna.

- *Sensor Offset*: The sensor offset corresponds to the offset of virtual measurement center from the probe tip (on probe axis). No tolerance required.

Certificate No: ES3-3241_Sep11

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ES3DV3 – SN:3241

September 27, 2011

Probe ES3DV3

SN:3241

Manufactured:	May 5, 2009
Calibrated:	September 27, 2011

Calibrated for DASY/EASY Systems
(Note: non-compatible with DASY2 system!)

Certificate No: ES3-3241_Sep11   Page 3 of 11

ES3DV3– SN:3241 September 27, 2011

DASY/EASY - Parameters of Probe: ES3DV3 - SN:3241

Basic Calibration Parameters

	Sensor X	Sensor Y	Sensor Z	Unc (k=2)
Norm $(\mu V/(V/m)^2)^A$	1.18	0.87	1.05	± 10.1 %
DCP $(mV)^B$	101.3	104.7	100.8	

Modulation Calibration Parameters

UID	Communication System Name	PAR		A dB	B dB	C dB	VR mV	Unc^E (k=2)
10000	CW	0.00	X	0.00	0.00	1.00	146.9	±3.0 %
			Y	0.00	0.00	1.00	123.7	
			Z	0.00	0.00	1.00	140.3	

The reported uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor k=2, which for a normal distribution corresponds to a coverage probability of approximately 95%.

^{A} The uncertainties of NormX,Y,Z do not affect the E^2-field uncertainty inside TSL (see Pages 5 and 6).
^{B} Numerical linearization parameter: uncertainty not required.
^{E} Uncertainty is determined using the max. deviation from linear response applying rectangular distribution and is expressed for the square of the field value.

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ES3DV3– SN:3241

September 27, 2011

DASY/EASY - Parameters of Probe: ES3DV3 - SN:3241

Calibration Parameter Determined in Head Tissue Simulating Media

f (MHz) [c]	Relative Permittivity [F]	Conductivity (S/m) [F]	ConvF X	ConvF Y	ConvF Z	Alpha	Depth (mm)	Unct. (k=2)
835	41.5	0.90	6.18	6.18	6.18	0.80	1.00	± 12.0 %
900	41.5	0.97	6.07	6.07	6.07	0.80	1.00	± 12.0 %
1750	40.1	1.37	5.32	5.32	5.32	0.80	1.25	± 12.0 %
1810	40.0	1.40	5.15	5.15	5.15	0.80	1.26	± 12.0 %
1900	40.0	1.40	5.09	5.09	5.09	0.80	1.25	± 12.0 %
2000	40.0	1.40	5.07	5.07	5.07	0.80	1.22	± 12.0 %
2450	39.2	1.80	4.45	4.45	4.45	0.74	1.30	± 12.0 %

[c] Frequency validity of ± 100 MHz only applies for DASY v4.4 and higher (see Page 2), else it is restricted to ± 50 MHz. The uncertainty is the RSS of the ConvF uncertainty at calibration frequency and the uncertainty for the indicated frequency band.
[F] At frequencies below 3 GHz, the validity of tissue parameters (ε and σ) can be relaxed to ± 10% if liquid compensation formula is applied to measured SAR values. At frequencies above 3 GHz, the validity of tissue parameters (ε and σ) is restricted to ± 5%. The uncertainty is the RSS of the ConvF uncertainty for indicated target tissue parameters.

Certificate No: ES3-3241_Sep11

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ES3DV3– SN:3241   September 27, 2011

DASY/EASY - Parameters of Probe: ES3DV3- SN:3241

Calibration Parameter Determined in Body Tissue Simulating Media

f (MHz) ^{G}	Relative Permittivity ^{F}	Conductivity (S/m) ^{F}	ConvF X	ConvF Y	ConvF Z	Alpha	Depth (mm)	Unct. (k=2)
835	55.2	0.97	6.19	6.19	6.19	0.80	1.00	± 12.0 %
900	55.0	1.05	6.12	6.12	6.12	0.80	1.00	± 12.0 %
1750	53.4	1.49	4.85	4.85	4.85	0.80	1.32	± 12.0 %
1810	53.3	1.52	4.78	4.78	4.78	0.80	1.29	± 12.0 %
1900	53.3	1.52	4.67	4.67	4.67	0.80	1.32	± 12.0 %
2000	53.3	1.52	4.76	4.76	4.76	0.75	1.35	± 12.0 %
2450	52.7	1.95	4.29	4.29	4.29	0.80	1.20	± 12.0 %

^{G} Frequency validity of ± 100 MHz only applies for DASY v4.4 and higher (see Page 2), else it is restricted to ± 50 MHz. The uncertainty is the RSS of the ConvF uncertainty at calibration frequency and the uncertainty for the indicated frequency band.
^{F} At frequencies below 3 GHz, the validity of tissue parameters (ϵ and σ) can be relaxed to ± 10% if liquid compensation formula is applied to measured SAR values. At frequencies above 3 GHz, the validity of tissue parameters (ϵ and σ) is restricted to ± 5%. The uncertainty is the RSS of the ConvF uncertainty for indicated target tissue parameters.

Certificate No: ES3-3241_Sep11   Page 6 of 11

Frequency Response of E-Field
(TEM-Cell: ifi110 EXX, Waveguide: R22)
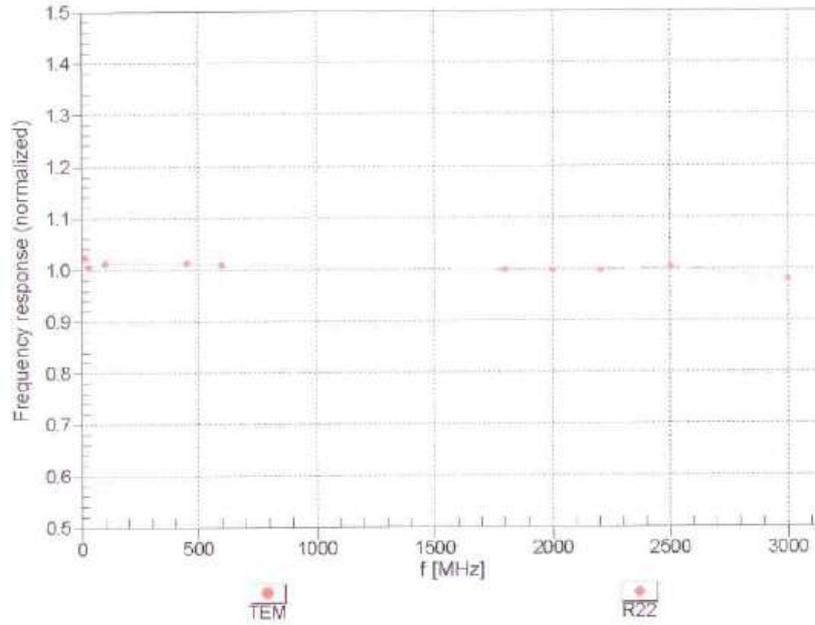
Uncertainty of Frequency Response of E-field: ± 6.3% (k=2)

ES3DV3– SN:3241

September 27, 2011

Receiving Pattern (φ), ϑ = 0°

f=600 MHz,TEM

f=1800 MHz,R22
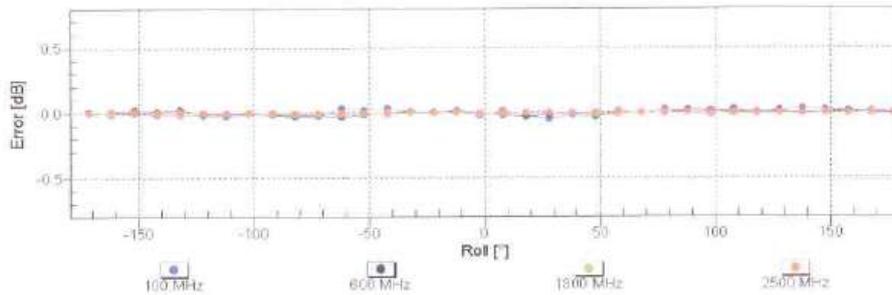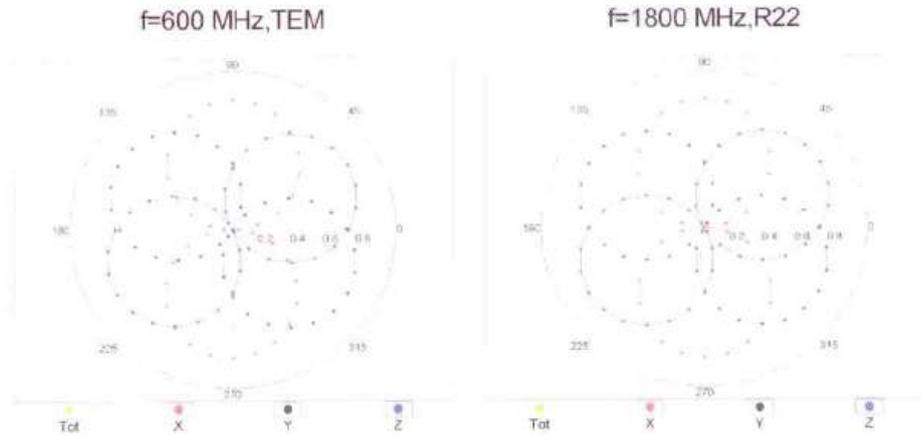
Uncertainty of Axial Isotropy Assessment: ± 0.5% (k=2)

Certificate No: ES3-3241_Sep11

Page 8 of 11

Dynamic Range f(SAR_head)
(TEM cell , f = 900 MHz)
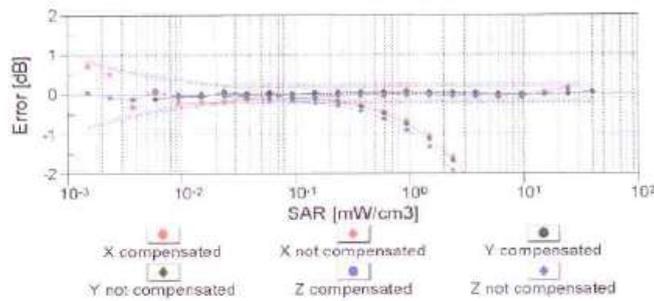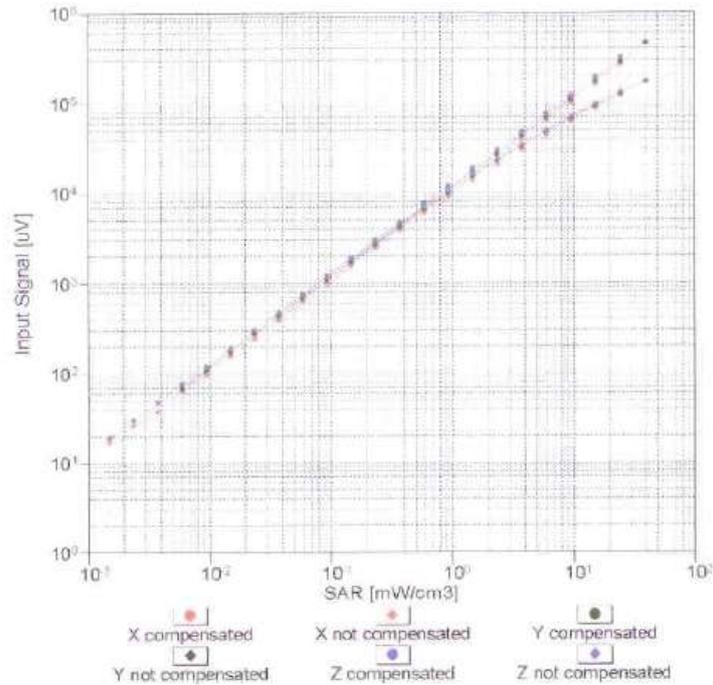
Uncertainty of Linearity Assessment: ± 0.6% (k=2)

Conversion Factor Assessment

f = 835 MHz, WGLS R9 (H_convF)

f = 2000 MHz, WGLS R22 (H_convF)
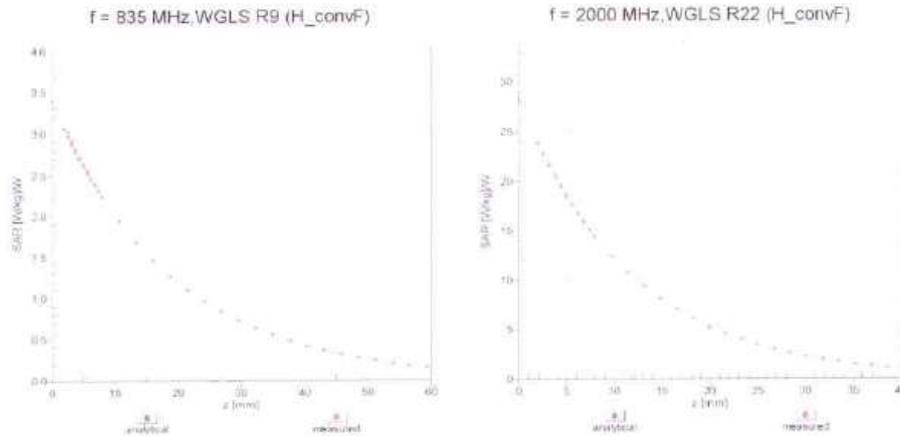
Deviation from Isotropy in Liquid
Error (φ, ϑ), f = 900 MHz
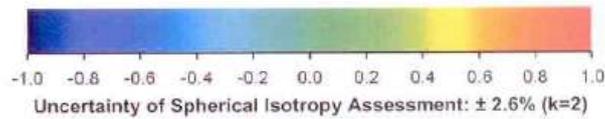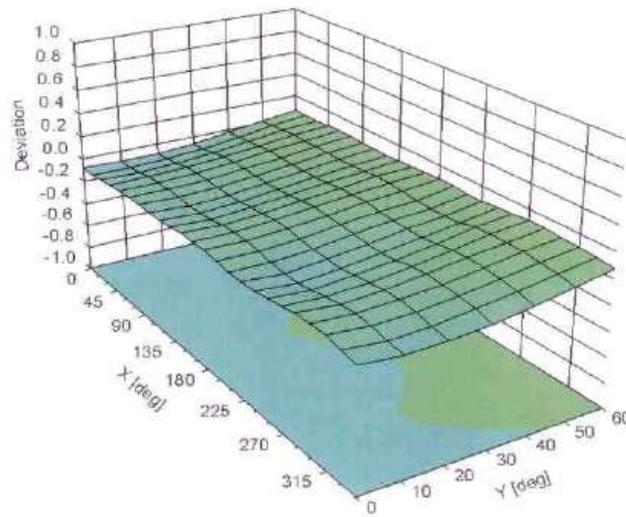
Uncertainty of Spherical Isotropy Assessment: ± 2.6% (k=2)

DASY/EASY - Parameters of Probe: ES3DV3 - SN:3241

Other Probe Parameters

Sensor Arrangement	Triangular
Connector Angle (°)	Not applicable
Mechanical Surface Detection Mode	enabled
Optical Surface Detection Mode	disabled
Probe Overall Length	337 mm
Probe Body Diameter	10 mm
Tip Length	10 mm
Tip Diameter	4 mm
Probe Tip to Sensor X Calibration Point	2 mm
Probe Tip to Sensor Y Calibration Point	2 mm
Probe Tip to Sensor Z Calibration Point	2 mm
Recommended Measurement Distance from Surface	3 mm

ANNEX H:DAE4 Calibration Certificate

工业和信息化部通信计量中心
Telecommunication Metrology Center of MIIT

Add: No.52 Huayuanbei Road, Haidian District, Beijing, 100191, China
Tel: +86-10-62304633-2079　　Fax: +86-10-62304793
E-mail: Info@emcite.com　　Http://www.emcite.com

Client	Tejet		Certificate No: DAE4-1226_Jun11

CALIBRATION CERTIFICATE

Object	DAE4 - SN: 1226
Calibration Procedure(s)	TMC-XZ-01-029 Calibration procedure for the data acquisition electronics (DAE)
Calibration date:	June 13, 2011
Condition of the calibrated item	In Tolerance

This calibration Certificate documents the traceability to national standards, which realize the physical units of measurements(SI). The measurements and the uncertainties with confidence probability are given on the following pages and are part of the certificate.

All calibrations have been conducted in the closed laboratory facility: environment temperature(22±3)℃ and humidity<70%.

Calibration Equipment used (M&TE critical for calibration)

Primary Standards	ID #	Cal Date(Calibrated by, Certificate No.)	Scheduled Calibration
Multimeter 3458A	MY45041463	12-Nov-10 (TMC, No: DLsc2010-1115)	Nov-11
DC POWER SUPPLY 66321D	MY43001657	12-Nov-10 (TMC, No: JZ10-290)	Nov-11

Secondary Standards	ID #	Check Date (in house)	Scheduled Check
Calibrator Box	/	18-Jun-10 (TMC, in house check)	In house check Jun-11

	Name	Function	Signature
Calibrated by:	Lin Hao	SAR Test Engineer	
Reviewed by:	Qi Dianyuan	SAR Project Leader	
Approved by:	Xiao Li	Deputy Director of the laboratory	

Issued: June 13, 2011

This calibration certificate shall not be reproduced except in full without written approval of the laboratory.

Certificate No: DAE4-1226_Jun11　　　　Page 1 of 5

Glossary:

DAE	data acquisition electronics
Connector angle	information used in DASY system to align probe sensor X to the robot coordinate system.

Methods Applied and Interpretation of Parameters:

- DC Voltage Measurement: Calibration Factor assessed for use in DASY system by comparison with a calibrated instrument traceable to national standards. The figure given corresponds to the full scale range of the voltmeter in the respective range.
- Connector angle: The angle of the connector is assessed measuring the angle mechanically by a tool inserted. Uncertainty is not required.
- The following parameters contain technical information as a result from the performance test and require no uncertainty.
- DC Voltage Measurement Linearity: Verification of the Linearity at +10% and -10% of the nominal calibration voltage. Influence of offset voltage is included in this measurement.
- Common mode sensitivity: Influence of a positive or negative common mode voltage on the differential measurement.
- Channel separation: Influence of a voltage on the neighbor channels not subject to an input voltage.
- AD Converter Values with inputs shorted: Values on the internal AD converter corresponding to zero input voltage.
- Input Offset Measurement: Output voltage and statistical results over a large number of zero voltage measurements.

Add: No.52 Huayuanbei Road, Haidian District, Beijing, 100191, China
Tel: +86-10-62304633-2079   Fax: +86-10-62304793
E-mail: Info@emcite.com   Http://www.emcite.com

DC Voltage Measurement

A/D - Converter Resolution nominal
High Range: 1LSB = $6.1\,\mu V$,   full range = $-100...+300$ mV
Low Range: 1LSB =   61nV ,   full range = $-1.......+3$mV
DASY measurement parameters: Auto Zero Time: 3 sec; Measuring time: 3 sec

Calibration Factors	X	Y	Z
High Range	$405.837 \pm 0.1\%$ (k=2)	$405.272 \pm 0.1\%$ (k=2)	$405.326 \pm 0.1\%$ (k=2)
Low Range	$3.99601 \pm 0.7\%$ (k=2)	$4.01768 \pm 0.7\%$ (k=2)	$4.02083 \pm 0.7\%$ (k=2)

Connector Angle

Connector Angle to be used in DASY system	$112.5\,° \pm 1\,°$

Certificate No: DAE4-1226_Jun11   Page 3 of 5

Appendix
1. DC Voltage Linearity

High Range		Input (μV)	Reading (μV)	Error (%)
Channel X	+ Input	200000	200000	0.00
Channel X	+ Input	20000	20003.91	0.03
Channel X	- Input	20000	-20002.26	0.01
Channel Y	+ Input	200000	200000	0.00
Channel Y	+ Input	20000	20004.30	0.02
Channel Y	- Input	20000	-20001.84	0.01
Channel Z	+ Input	200000	200000.6	0.00
Channel Z	+ Input	20000	20002.05	0.01
Channel Z	- Input	20000	-20003.32	0.02

Low Range		Input (μV)	Reading (μV)	Error (%)
Channel X	+ Input	2000	1999.9	0.00
Channel X	+ Input	200	199.61	-0.19
Channel X	- Input	200	-200.68	0.36
Channel Y	+ Input	2000	1999.9	0.00
Channel Y	+ Input	200	199.40	-0.29
Channel Y	- Input	200	-200.46	0.23
Channel Z	+ Input	2000	2000	0.00
Channel Z	+ Input	200	199.33	-0.34
Channel Z	- Input	200	-201.29	0.66

2. Common mode sensitivity
DASY measurement parameters: Auto Zero Time: 3 sec; Measuring time: 3 sec

	Common mode Input Voltage (mV)	High Range Average Reading (μV)	Low Range Average Reading (μV)
Channel X	200	3.40	3.47
	- 200	-2.47	-3.10
Channel Y	200	0.15	-0.51
	- 200	-0.60	-1.12
Channel Z	200	-9.89	-10.17
	- 200	7.71	8.15

Certificate No: DAE4-1226_Jun11   Page 4 of 5

3. Channel separation

DASY measurement parameters: Auto Zero Time: 3 sec; Measuring time: 3 sec

	Input Voltage (mV)	Channel X (μV)	Channel Y (μV)	Channel Z (μV)
Channel X	200	-	2.59	-0.31
Channel Y	200	0.57	-	2.47
Channel Z	200	-1.89	0.23	-

4. AD-Converter Values with inputs shorted

DASY measurement parameters: Auto Zero Time: 3 sec; Measuring time: 3 sec

	High Range (LSB)	Low Range (LSB)
Channel X	16128	16441
Channel Y	15957	16202
Channel Z	15979	16032

5. Input Offset Measurement

DASY measurement parameters: Auto Zero Time: 3 sec; Measuring time: 3 sec

Input 10MΩ

	Average (μV)	min. Offset (μV)	max. Offset (μV)	Std. Deviation(μV)
Channel X	0.57	-1.05	2.02	0.41
Channel Y	-1.02	-1.96	-0.02	0.39
Channel Z	1.15	-0.07	1.94	0.34

6. Input Offset Current

Nominal Input Circuitry offset current on all channels: <25fA

7. Input Resistance

	Zeroing (MOhm)	Measuring (MOhm)
Channel X	0.2000	200.0
Channel Y	0.2000	200.0
Channel Z	0.2000	200.0

Certificate No: DAE4-1226_Jun11   Page 5 of 5

ANNEX I: D835V2 Calibration Certificate

工业和信息化部通信计量中心
Telecommunication Metrology Center of MIIT

TMC

CNAS L0442

Client	Tejet		Certificate No: D835V2-4d100_Jun11

CALIBRATION CERTIFICATE

Object	D835V2 - SN: 4d100
Calibration Procedure(s)	TMC-XZ-01-027 Calibration procedure for dipole validation kits
Calibration date:	June 14, 2011
Condition of the calibrated item	In Tolerance

This calibration Certificate documents the traceability to national standards, which realize the physical units of measurements(SI). The measurements and the uncertainties with confidence probability are given on the following pages and are part of the certificate.

All calibrations have been conducted in the closed laboratory facility: environment temperature(22±3)℃ and humidity<70%.

Calibration Equipment used (M&TE critical for calibration)

Primary Standards	ID #	Cal Date(Calibrated by, Certificate No.)	Scheduled Calibration
Power Meter NRVD	101253	03-Sep-10 (TMC, No.JZ10-248)	Sep-11
Power sensor NRV-Z5	100333	03-Sep-10 (TMC, No. JZ10-248)	Sep-11
Reference Probe ES3DV3	SN 3149	25-Sep-10(SPEAG, No.ES3-3149_Sep10)	Sep-11
DAE4	SN 771	21-Nov-10(SPEAG, No.DAE4-771_Nov10)	Nov-11
RF generator E4438C	MY45092879	17-Jun-10(TMC, No.JZ10-302)	Jun-11
Network Analyzer 8753E	US38433212	28-Aug-10(TMC, No.JZ10-056)	Aug-11

	Name	Function	Signature
Calibrated by:	Lin Hao	SAR Test Engineer	
Reviewed by:	Qi Dianyuan	SAR Project Leader	
Approved by:	Xiao Li	Deputy Director of the laboratory	

Issued: July 5, 2011

This calibration certificate shall not be reproduced except in full without written approval of the laboratory.

Certificate No: D835V2-4d100_Jun11   Page 1 of 9

Glossary:

TSL	tissue simulating liquid
ConvF	sensitivity in TSL / NORMx,y,z
N/A	not applicable or not measured

Calibration is Performed According to the Following Standards:
a) IEEE Std 1528-2003, "IEEE Recommended Practice for Determining the Peak Spatial-Averaged Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques", December 2003
b) IEC 62209-1, "Procedure to measure the Specific Absorption Rate (SAR) For hand-held devices used in close proximity to the ear (frequency range of 300MHz to 3GHz)", February 2005
c) Federal Communications Commission Office of Engineering & Technology (FCC OET), "Evaluating Compliance with FCC Guidelines for Human Exposure to Radiofrequency Electromagnetic Fields; Additional Information for Evaluating Compliance of Mobile and Portable Devices with FCC Limits for Human Exposure to Radiofrequency Emissions", Supplement C (Edition 01-01) to Bulletin 65

Additional Documentation:
d) DASY System Handbook

Methods Applied and Interpretation of Parameters:
- Measurement Conditions: Further details are available from the Validation Report at the end of the certificate. All figures stated in the certificate are valid at the frequency indicated.
- Antenna Parameters with TSL: The dipole is mounted with the spacer to position its feed point exactly below the center marking of the flat phantom section, with the arms oriented parallel to the body axis.
- Feed Point Impedance and Return Loss: These parameters are measured with the dipole positioned under the liquid filled phantom. The impedance stated is transformed from the measurement at the SMA connector to the feed point. The Return Loss ensures low reflected power. No uncertainty required.
- Electrical Delay: One-way delay between the SMA connector and the antenna feed point. No uncertainty required.
- SAR measured: SAR measured at the stated antenna input power.
- SAR normalized: SAR as measured, normalized to an input power of 1 W at the antenna connector.
- SAR for nominal TSL parameters: The measured TSL parameters are used to calculate the nominal SAR result.

Measurement Conditions

DASY system configuration, as far as not given on page 1.

DASY Version	DASY5	V5.0
Extrapolation	Advanced Extrapolation	
Phantom	2mm Oval Phantom ELI4	
Distance Dipole Center - TSL	15 mm	with Spacer
Zoom Scan Resolution	dx, dy, dz = 5 mm	
Frequency	835 MHz ± 1 MHz	

Head TSL parameters

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Head TSL parameters	22.0 °C	41.5	0.90 mho/m
Measured Head TSL parameters	(22.0 ± 0.2) °C	41.4 ± 6 %	0.89mho/m ± 6 %
Head TSL temperature during test	(21.7 ± 0.2) °C	----	----

SAR result with Head TSL

SAR averaged over 1 cm^3 (1 g) of Head TSL	Condition	
SAR measured	250 mW input power	2.37 mW / g
SAR normalized	normalized to 1W	9.48 mW / g
SAR for nominal Head TSL parameters [1]	normalized to 1W	9.53 mW /g ± 17.0 % (k=2)

SAR averaged over 10 cm^3 (10 g) of Head TSL	Condition	
SAR measured	250 mW input power	1.53 mW / g
SAR normalized	normalized to 1W	6.12 mW / g
SAR for nominal Head TSL parameters [1]	normalized to 1W	6.14 mW /g ± 16.5 % (k=2)

---

[1] Correction to nominal TSL parameters according to d), chapter "SAR Sensitivities"

Certificate No: D835V2-4d100_Jun11   Page 3 of 9

Body TSL parameters

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Body TSL parameters	22.0 °C	55.2	0.97 mho/m
Measured Body TSL parameters	(22.0 ± 0.2) °C	53.8 ± 6%	1.00mho/m ± 6 %
Body TSL temperature during test	(21.9 ± 0.2) °C	----	----

SAR result with Body TSL

SAR averaged over 1 cm^3 (1 g) of Body TSL	Condition	
SAR measured	250 mW input power	2.45 mW / g
SAR normalized	normalized to 1W	9.80 mW / g
SAR for nominal Body TSL parameters [2]	normalized to 1W	**9.47 mW /g ± 17.0 % (k=2)**

SAR averaged over 10 cm^3 (10 g) of Body TSL	Condition	
SAR measured	250 mW input power	1.59 mW / g
SAR normalized	normalized to 1W	6.36 mW / g
SAR for nominal Body TSL parameters [2]	normalized to 1W	**6.21 mW /g ± 16.5 % (k=2)**

---

[2] Correction to nominal TSL parameters according to d), chapter "SAR Sensitivities"

Certificate No: D835V2-4d100_Jun11   Page 4 of 9

Appendix

Antenna Parameters with Head TSL

Impedance, transformed to feed point	47.8Ω + 0.22 jΩ
Return Loss	- 32.8dB

Antenna Parameters with Body TSL

Impedance, transformed to feed point	45.9Ω + 3.6 jΩ
Return Loss	- 24.9dB

General Antenna Parameters and Design

Electrical Delay (one direction)	2.983 ns

After long term use with 100W radiated power, only a slight warming of the dipole near the feedpoint can be measured.

The dipole is made of standard semirigid coaxial cable. The center conductor of the feeding line is directly connected to the second arm of the dipole. The antenna is therefore short-circuited for DC-signals.
No excessive force must be applied to the dipole arms, because they might bend or the soldered connections near the feedpoint may be damaged.

Additional EUT Data

Manufactured by	SPEAG
Manufactured on	March 9, 2010

Certificate No: D835V2-4d100_Jun11   Page 5 of 9

DASY5 Validation Report for Head TSL

Date/Time: 2011-6-14 8:57:36

Test Laboratory: TMC, Beijing, China

DUT: Dipole 835 MHz; Type: D835V2; Serial: SN: 4d100

Communication System: CW Frequency: 835 MHz Duty Cycle: 1:1
Medium: Head 835MHz
Medium parameters used: f = 835 MHz; σ = 0.89 mho/m; ε_r = 41.4; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:
- Probe: ES3DV3 - SN3149; ConvF(6.56, 6.56, 6.56); Calibrated: 25.09.10
- Electronics: DAE4 Sn771; Calibration: 21.11.10
- Phantom: 2mm Oval Phantom ELI4; Type: QDOVA001BB
- Measurement SW: DASY5, V5.0 Build 119.9; Postprocessing SW: SEMCAD, V13.2 Build 87

Pin=250mW; d=15mm/Zoom Scan (7x7x7)/Cube 0:

Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 56.1 V/m; Power Drift = 0.096 dB
Peak SAR (extrapolated) = 3.45 W/kg
SAR(1 g) = 2.37 mW/g; SAR(10 g) = 1.53 mW/g
Maximum value of SAR (measured) = 2.54 mW/g

0 dB = 2.54mW/g

Certificate No: D835V2-4d100_Jun11   Page 6 of 9

Impedance Measurement Plot for Head TSL

Certificate No: D835V2-4d100_Jun11   Page 7 of 9

DASY5 Validation Report for Body TSL

Date/Time: 2011-6-14 9:52:23

Test Laboratory: TMC, Beijing, China

DUT: Dipole 835 MHz; Type: D835V2; Serial: SN: 4d100

Communication System: CW Frequency: 835 MHz Duty Cycle: 1:1
Medium: Body 835MHz
Medium parameters used: f = 835 MHz; σ = 1.00 mho/m; ε_r = 53.8; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: ES3DV3 - SN3149; ConvF(6.22, 6.22, 6.22); Calibrated: 25.09.10
- Electronics: DAE4 Sn771; Calibration: 21.11.10
- Phantom: 2mm Oval Phantom ELI4; Type: QDOVA001BB
- Measurement SW: DASY5, V5.0 Build 119.9; Postprocessing SW: SEMCAD, V13.2 Build 87

Pin=250mW; d=15mm/Zoom Scan (7x7x7)/Cube 0:
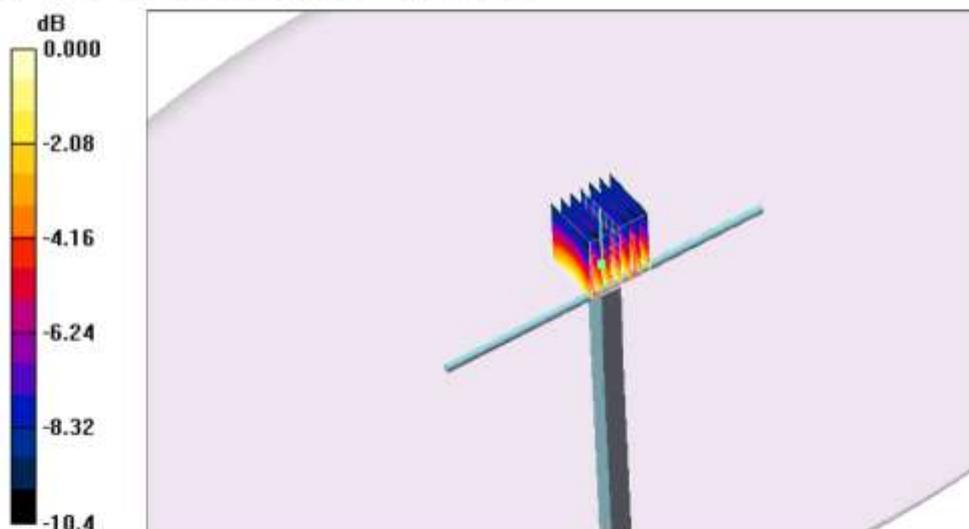
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 41.3 V/m; Power Drift = -0.084 dB
Peak SAR (extrapolated) = 3.52 W/kg
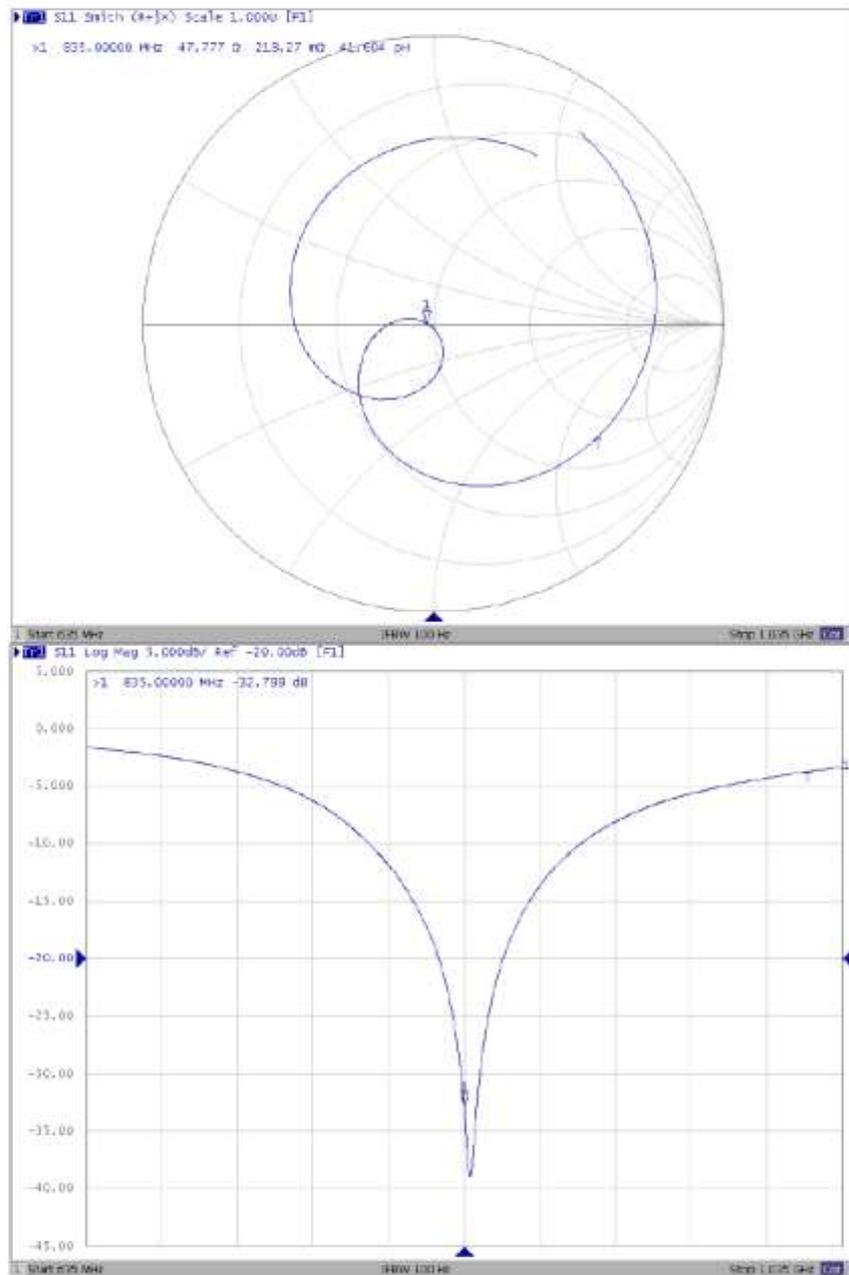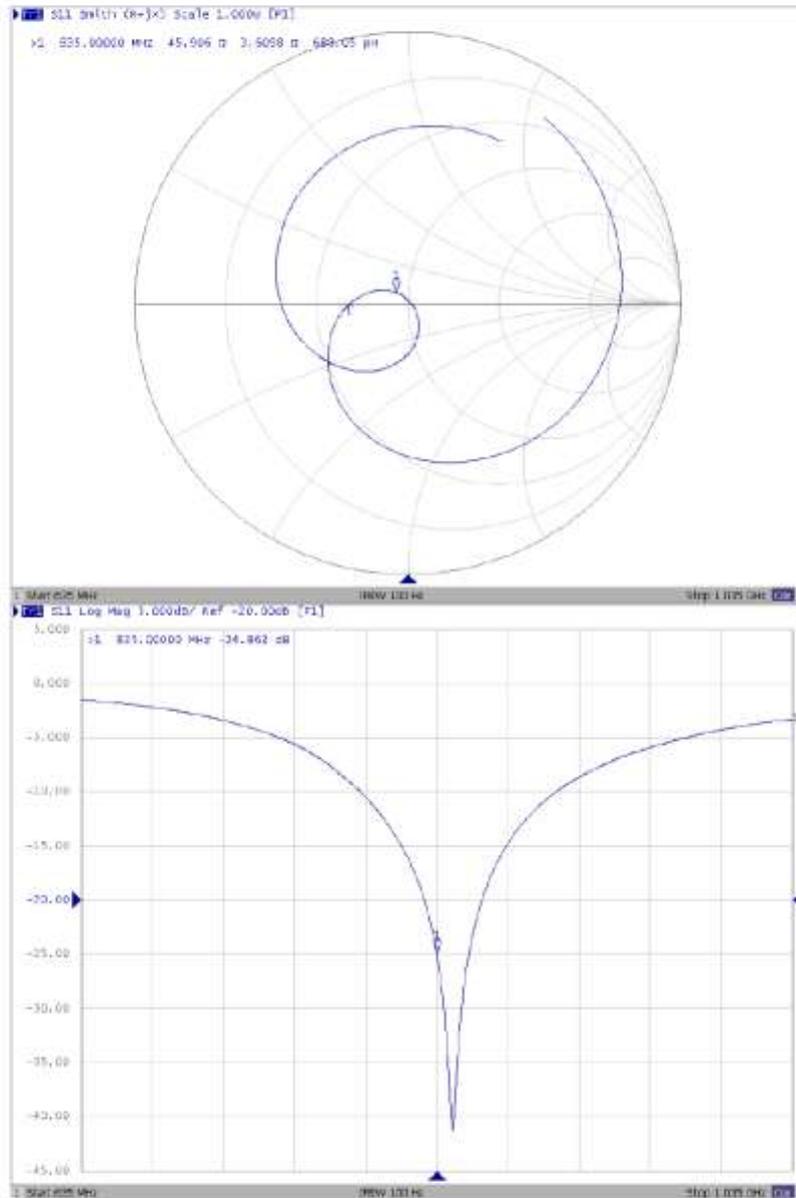SAR(1 g) = 2.45 mW/g; SAR(10 g) = 1.59 mW/g
Maximum value of SAR (measured) = 2.66 mW/g

0 dB = 2.66mW/g

Certificate No: D835V2-4d100_Jun11   Page 8 of 9

Impedance Measurement Plot for Body TSL

Certificate No: D835V2-4d100_Jun11   Page 9 of 9

ANNEX J: D1900V2 Calibration Certificate

Calibration Laboratory of
Schmid & Partner
Engineering AG
Zeughausstrasse 43, 8004 Zurich, Switzerland

S Schweizerischer Kalibrierdienst
C Service suisse d'étalonnage
S Servizio svizzero di taratura
S Swiss Calibration Service

Accredited by the Swiss Accreditation Service (SAS)
The Swiss Accreditation Service is one of the signatories to the EA
Multilateral Agreement for the recognition of calibration certificates

Accreditation No.: **SCS 108**

Client	**Auden**		Certificate No: **D1900V2-5d142_Jul11**

CALIBRATION CERTIFICATE

Object	D1900V2 - SN: 5d142
Calibration procedure(s)	QA CAL-05.v8 Calibration procedure for dipole validation kits above 700 MHz
Calibration date:	July 22, 2011

This calibration certificate documents the traceability to national standards, which realize the physical units of measurements (SI).
The measurements and the uncertainties with confidence probability are given on the following pages and are part of the certificate.

All calibrations have been conducted in the closed laboratory facility: environment temperature $(22 \pm 3)°C$ and humidity < 70%.

Calibration Equipment used (M&TE critical for calibration)

Primary Standards	ID #	Cal Date (Certificate No.)	Scheduled Calibration
Power meter EPM-442A	GB37480704	06-Oct-10 (No. 217-01266)	Oct-11
Power sensor HP 8481A	US37292783	06-Oct-10 (No. 217-01266)	Oct-11
Reference 20 dB Attenuator	SN: S5086 (20b)	29-Mar-11 (No. 217-01367)	Apr-12
Type-N mismatch combination	SN: 5047.2 / 06327	29-Mar-11 (No. 217-01371)	Apr-12
Reference Probe ES3DV3	SN: 3205	29-Apr-11 (No. ES3-3205_Apr11)	Apr-12
DAE4	SN: 601	04-Jul-11 (No. DAE4-601_Jul11)	Jul-12

Secondary Standards	ID #	Check Date (in house)	Scheduled Check
Power sensor HP 8481A	MY41092317	18-Oct-02 (in house check Oct-09)	In house check: Oct-11
RF generator R&S SMT-06	100005	04-Aug-99 (in house check Oct-09)	In house check: Oct-11
Network Analyzer HP 8753E	US37390585 S4206	18-Oct-01 (in house check Oct-10)	In house check: Oct-11

	Name	Function	Signature
Calibrated by:	Dimce Iliev	Laboratory Technician	*D. Iliev*
Approved by:	Katja Pokovic	Technical Manager	

Issued: July 22, 2011

This calibration certificate shall not be reproduced except in full without written approval of the laboratory.

Certificate No: D1900V2-5d142_Jul11   Page 1 of 8

Calibration Laboratory of
Schmid & Partner
  Engineering AG
Zeughausstrasse 43, 8004 Zurich, Switzerland

S	Schweizerischer Kalibrierdienst
S	Service suisse d'étalonnage
C	Servizio svizzero di taratura
S	Swiss Calibration Service

Accredited by the Swiss Accreditation Service (SAS)
The Swiss Accreditation Service is one of the signatories to the EA
Multilateral Agreement for the recognition of calibration certificates

Accreditation No.: **SCS 108**

Glossary:

TSL	tissue simulating liquid
ConvF	sensitivity in TSL / NORM x,y,z
N/A	not applicable or not measured

Calibration is Performed According to the Following Standards:
  a) IEEE Std 1528-2003, "IEEE Recommended Practice for Determining the Peak Spatial-Averaged Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques", December 2003
  b) IEC 62209-1, "Procedure to measure the Specific Absorption Rate (SAR) for hand-held devices used in close proximity to the ear (frequency range of 300 MHz to 3 GHz)", February 2005
  c) Federal Communications Commission Office of Engineering & Technology (FCC OET), "Evaluating Compliance with FCC Guidelines for Human Exposure to Radiofrequency Electromagnetic Fields; Additional Information for Evaluating Compliance of Mobile and Portable Devices with FCC Limits for Human Exposure to Radiofrequency Emissions", Supplement C (Edition 01-01) to Bulletin 65

Additional Documentation:
  d) DASY4/5 System Handbook

Methods Applied and Interpretation of Parameters:
  * *Measurement Conditions:* Further details are available from the Validation Report at the end of the certificate. All figures stated in the certificate are valid at the frequency indicated.
  * *Antenna Parameters with TSL:* The dipole is mounted with the spacer to position its feed point exactly below the center marking of the flat phantom section, with the arms oriented parallel to the body axis.
  * *Feed Point Impedance and Return Loss:* These parameters are measured with the dipole positioned under the liquid filled phantom. The impedance stated is transformed from the measurement at the SMA connector to the feed point. The Return Loss ensures low reflected power. No uncertainty required.
  * *Electrical Delay:* One-way delay between the SMA connector and the antenna feed point. No uncertainty required.
  * *SAR measured:* SAR measured at the stated antenna input power.
  * *SAR normalized:* SAR as measured, normalized to an input power of 1 W at the antenna connector.
  * *SAR for nominal TSL parameters:* The measured TSL parameters are used to calculate the nominal SAR result.

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Measurement Conditions

DASY system configuration, as far as not given on page 1.

DASY Version	DASY5	V52.6.2
Extrapolation	Advanced Extrapolation	
Phantom	Modular Flat Phantom	
Distance Dipole Center - TSL	10 mm	with Spacer
Zoom Scan Resolution	dx, dy, dz = 5 mm	
Frequency	1900 MHz ± 1 MHz	

Head TSL parameters

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Head TSL parameters	22.0 °C	40.0	1.40 mho/m
Measured Head TSL parameters	(22.0 ± 0.2) °C	39.1 ± 6 %	1.42 mho/m ± 6 %
Head TSL temperature change during test	< 0.5 °C	----	----

SAR result with Head TSL

SAR averaged over 1 cm^3 (1 g) of Head TSL	Condition	
SAR measured	250 mW input power	9.99 mW / g
SAR for nominal Head TSL parameters	normalized to 1W	**39.4 mW /g ± 17.0 % (k=2)**

SAR averaged over 10 cm^3 (10 g) of Head TSL	condition	
SAR measured	250 mW input power	5.21 mW / g
SAR for nominal Head TSL parameters	normalized to 1W	**20.7 mW /g ± 16.5 % (k=2)**

Body TSL parameters

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Body TSL parameters	22.0 °C	53.3	1.52 mho/m
Measured Body TSL parameters	(22.0 ± 0.2) °C	52.3 ± 6 %	1.53 mho/m ± 6 %
Body TSL temperature change during test	< 0.5 °C	----	----

SAR result with Body TSL

SAR averaged over 1 cm^3 (1 g) of Body TSL	Condition	
SAR measured	250 mW input power	10.2 mW / g
SAR for nominal Body TSL parameters	normalized to 1W	**40.5 mW / g ± 17.0 % (k=2)**

SAR averaged over 10 cm^3 (10 g) of Body TSL	condition	
SAR measured	250 mW input power	5.36 mW / g
SAR for nominal Body TSL parameters	normalized to 1W	**21.3 mW / g ± 16.5 % (k=2)**

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Appendix

Antenna Parameters with Head TSL

Impedance, transformed to feed point	54.6 Ω + 5.8 jΩ
Return Loss	- 23.0 dB

Antenna Parameters with Body TSL

Impedance, transformed to feed point	47.8 Ω + 6.7 jΩ
Return Loss	- 22.9 dB

General Antenna Parameters and Design

Electrical Delay (one direction)	1.201 ns

After long term use with 100W radiated power, only a slight warming of the dipole near the feedpoint can be measured.

The dipole is made of standard semirigid coaxial cable. The center conductor of the feeding line is directly connected to the second arm of the dipole. The antenna is therefore short-circuited for DC-signals.
No excessive force must be applied to the dipole arms, because they might bend or the soldered connections near the feedpoint may be damaged.

Additional EUT Data

Manufactured by	SPEAG
Manufactured on	March 11, 2011

DASY5 Validation Report for Head TSL

Date: 20.07.201

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole 1900 MHz; Type: D1900V2; Serial: D1900V2 - SN: 5d142

Communication System: CW; Frequency: 1900 MHz
Medium parameters used: f = 1900 MHz; σ = 1.42 mho/m; ε_r = 39.1; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY52 Configuration:

- Probe: ES3DV3 - SN3205; ConvF(5.01, 5.01, 5.01); Calibrated: 29.04.2011

- Sensor-Surface: 3mm (Mechanical Surface Detection)

- Electronics: DAE4 Sn601; Calibrated: 04.07.2011

- Phantom: Flat Phantom 5.0 (front); Type: QD000P50AA; Serial: 1001

- DASY52 52.6.2(482); SEMCAD X 14.4.5(3634)

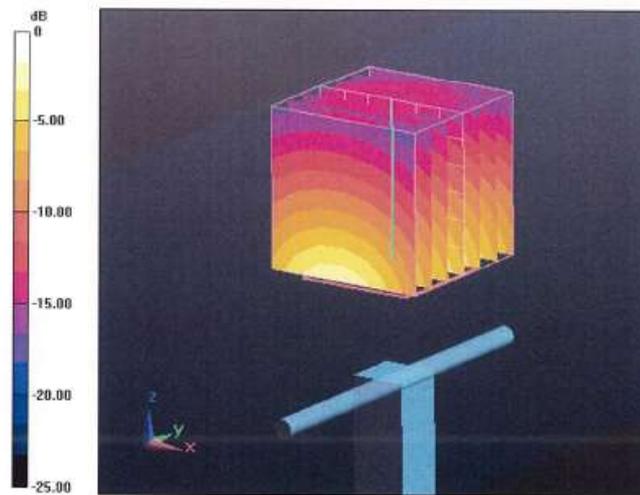**Dipole Calibration for Head Tissue/Pin=250 mW, d=10mm/Zoom Scan (7x7x7)/Cube 0:**
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 97.703 V/m; Power Drift = 0.02 dB
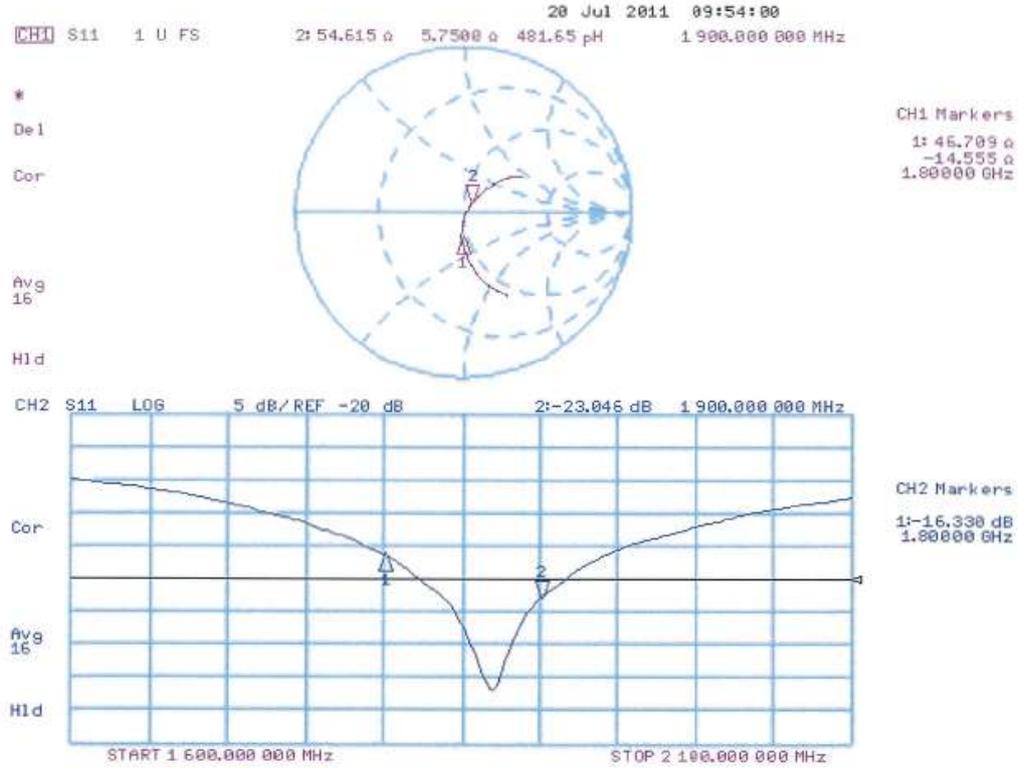Peak SAR (extrapolated) = 18.174 W/kg
SAR(1 g) = 9.99 mW/g; SAR(10 g) = 5.21 mW/g
Maximum value of SAR (measured) = 12.496 mW/g

0 dB = 12.500mW/g

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Impedance Measurement Plot for Head TSL

DASY5 Validation Report for Body TSL

Date: 22.07.201

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole 1900 MHz; Type: D1900V2; Serial: D1900V2 - SN: 5d142

Communication System: CW; Frequency: 1900 MHz
Medium parameters used: f = 1900 MHz; σ = 1.53 mho/m; ε_r = 52.3; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY52 Configuration:

- Probe: ES3DV3 - SN3205; ConvF(4.62, 4.62, 4.62); Calibrated: 29.04.2011

- Sensor-Surface: 3mm (Mechanical Surface Detection)

- Electronics: DAE4 Sn601; Calibrated: 04.07.2011

- Phantom: Flat Phantom 5.0 (back); Type: QD000P50AA; Serial: 1002

- DASY52 52.6.2(482); SEMCAD X 14.4.5(3634)

Dipole Calibration for Body Tissue/Pin=250 mW, d=10mm/Zoom Scan (7x7x7)/Cube 0:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 95.443 V/m; Power Drift = 0.0058 dB
Peak SAR (extrapolated) = 18.044 W/kg
SAR(1 g) = 10.2 mW/g; SAR(10 g) = 5.36 mW/g
Maximum value of SAR (measured) = 12.793 mW/g

0 dB = 12.790mW/g

Impedance Measurement Plot for Body TSL


```
                                          22 Jul 2011  09:48:49
CH1  S11   1 U FS        2: 47.813 Ω  6.7070 Ω  561.82 pH    1 900.000 000 MHz

*
De1

Cor




Avg
16

H1d

CH2  S11   LOG      5 dB/ REF  -20 dB       2:-22.858 dB   1 900.000 000 MHz



Cor




Avg
16

H1d

       START 1 600.000 000 MHz             STOP 2 100.000 000 MHz
```
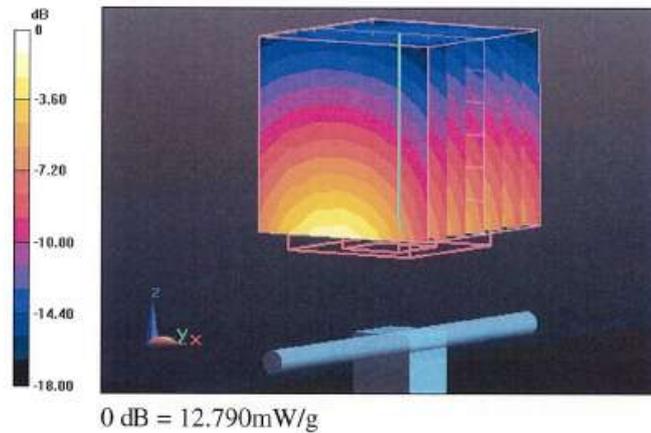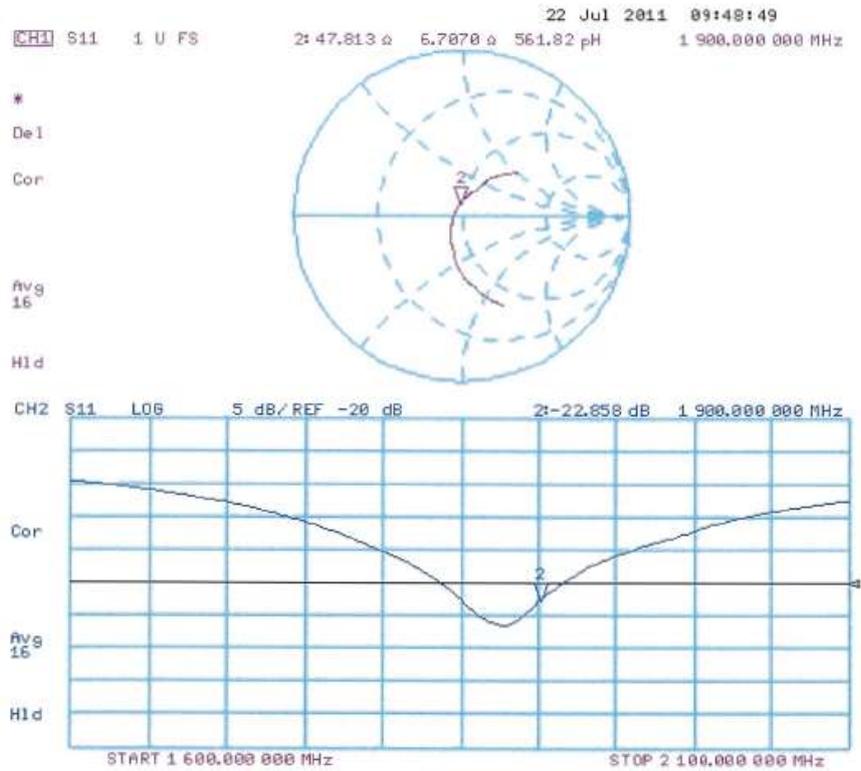
ANNEX K: D2450V2 Calibration Certificate

工业和信息化部通信计量中心
Telecommunication Metrology Center of MIIT

TMC

CNAS
CNAS L0442

| Client | Tejet | | Certificate No: D2450V2-845_ Jun11 |

CALIBRATION CERTIFICATE

Object	D2450V2 - SN: 845
Calibration Procedure(s)	TMC-XZ-01-027 Calibration procedure for dipole validation kits
Calibration date:	June 14, 2011
Condition of the calibrated item	In Tolerance

This calibration Certificate documents the traceability to national standards, which realize the physical units of measurements(SI). The measurements and the uncertainties with confidence probability are given on the following pages and are part of the certificate.

All calibrations have been conducted in the closed laboratory facility: environment temperature(22 ± 3)℃ and humidity<70%.

Calibration Equipment used (M&TE critical for calibration)

Primary Standards	SN.	Cal Date (Calibrated by, Certificate No.)	Scheduled Calibration
Power Meter NRVD	102083	11-Sep-10 (TMC, No.JZ10-443)	Sep-11
Power sensor NRV-Z5	100542	11-Sep-10 (TMC, No. JZ10-443)	Sep-11
Reference Probe EX3DV4	SN 3617	09-Jul-10 (SPEAG, No. EX3-3617_Jul10)	Jul-11
DAE4	SN 771	21-Nov-10 (SPEAG, No.DAE4-771_Nov10)	Nov-11
RF generator E4438C	MY49070393	13-Nov-10 (TMC, No.JZ10-394)	Nov-11
Network Analyzer 8753E	US38433212	28-Aug-10 (TMC, No.JZ10-056)	Aug-11

	Name	Function	Signature
Calibrated by:	Lin Hao	SAR Test Engineer	
Reviewed by:	Qi Dianyuan	SAR Project Leader	
Approved by:	Xiao Li	Deputy Director of the laboratory	

Issued: July 5, 2011

This calibration certificate shall not be reproduced except in full without written approval of the laboratory.

Certificate No: D2450V2-845_Jun11   Page 1 of 9

Glossary:

TSL	tissue simulating liquid
ConvF	sensitivity in TSL / NORMx,y,z
N/A	not applicable or not measured

Calibration is Performed According to the Following Standards:

a) IEEE Std 1528-2003, "IEEE Recommended Practice for Determining the Peak Spatial-Averaged Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques", December 2003

b) IEC 62209-1, "Procedure to measure the Specific Absorption Rate (SAR) For hand-held devices used in close proximity to the ear (frequency range of 300MHz to 3GHz)", February 2005

c) Federal Communications Commission Office of Engineering & Technology (FCC OET), "Evaluating Compliance with FCC Guidelines for Human Exposure to Radiofrequency Electromagnetic Fields; Additional Information for Evaluating Compliance of Mobile and Portable Devices with FCC Limits for Human Exposure to Radiofrequency Emissions", Supplement C (Edition 01-01) to Bulletin 65

Additional Documentation:

d) DASY System Handbook

Methods Applied and Interpretation of Parameters:

- Measurement Conditions: Further details are available from the Validation Report at the end of the certificate. All figures stated in the certificate are valid at the frequency indicated.
- Antenna Parameters with TSL: The dipole is mounted with the spacer to position its feed point exactly below the center marking of the flat phantom section, with the arms oriented parallel to the body axis.
- Feed Point Impedance and Return Loss: These parameters are measured with the dipole positioned under the liquid filled phantom. The impedance stated is transformed from the measurement at the SMA connector to the feed point. The Return Loss ensures low reflected power. No uncertainty required.
- Electrical Delay: One-way delay between the SMA connector and the antenna feed point. No uncertainty required.
- SAR measured: SAR measured at the stated antenna input power.
- SAR normalized: SAR as measured, normalized to an input power of 1 W at the antenna connector.
- SAR for nominal TSL parameters: The measured TSL parameters are used to calculate the nominal SAR result.

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Measurement Conditions

DASY system configuration, as far as not given on page 1.

DASY Version	DASY5	V5.0
Extrapolation	Advanced Extrapolation	
Phantom	2mm Oval Phantom ELI4	
Distance Dipole Center - TSL	10 mm	with Spacer
Zoom Scan Resolution	dx, dy, dz = 5 mm	
Frequency	2450 MHz ± 1 MHz	

Head TSL parameters

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Head TSL parameters	22.0 °C	39.2	1.80 mho/m
Measured Head TSL parameters	(22.0 ± 0.2) °C	39.9 ± 6 %	1.87mho/m ± 6 %
Head TSL temperature during test	(22.1 ± 0.2) °C	----	----

SAR result with Head TSL

SAR averaged over 1 cm^3 (1 g) of Head TSL	Condition	
SAR measured	250 mW input power	13.3 mW / g
SAR normalized	normalized to 1W	53.2 mW / g
SAR for nominal Head TSL parameters [1]	normalized to 1W	**52.8 mW /g ± 17.0 % (k=2)**

SAR averaged over 10 cm^3 (10 g) of Head TSL	Condition	
SAR measured	250 mW input power	6.05 mW / g
SAR normalized	normalized to 1W	24.2 mW / g
SAR for nominal Head TSL parameters [1]	normalized to 1W	**24.2 mW /g ± 16.5 % (k=2)**

---

[1] Correction to nominal TSL parameters according to d), chapter "SAR Sensitivities"

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Body TSL parameters

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Body TSL parameters	22.0 °C	52.7	1.95 mho/m
Measured Body TSL parameters	(22.0 ± 0.2) °C	51.0 ± 6%	1.94mho/m ± 6 %
Body TSL temperature during test	(21.9 ± 0.2) °C	----	----

SAR result with Body TSL

SAR averaged over 1 cm^3 (1 g) of Body TSL	Condition	
SAR measured	250 mW input power	13.1 mW / g
SAR normalized	normalized to 1W	52.4 mW / g
SAR for nominal Body TSL parameters [2]	normalized to 1W	**51.6 mW /g ± 17.0 % (k=2)**

SAR averaged over 10 cm^3 (10 g) of Body TSL	Condition	
SAR measured	250 mW input power	6.14 mW / g
SAR normalized	normalized to 1W	24.6 mW / g
SAR for nominal Body TSL parameters [2]	normalized to 1W	**24.3 mW /g ± 16.5 % (k=2)**

---

[2] Correction to nominal TSL parameters according to d), chapter "SAR Sensitivities"

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Appendix

Antenna Parameters with Head TSL

Impedance, transformed to feed point	47.9Ω - 1.1 jΩ
Return Loss	- 32.3dB

Antenna Parameters with Body TSL

Impedance, transformed to feed point	48.3Ω - 3.8 jΩ
Return Loss	- 27.5dB

General Antenna Parameters and Design

Electrical Delay (one direction)	3.004 ns

After long term use with 100W radiated power, only a slight warming of the dipole near the feedpoint can be measured.

The dipole is made of standard semirigid coaxial cable. The center conductor of the feeding line is directly connected to the second arm of the dipole. The antenna is therefore short-circuited for DC-signals.
No excessive force must be applied to the dipole arms, because they might bend or the soldered connections near the feedpoint may be damaged.

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DASY5 Validation Report for Head TSL

Date/Time: 2011-6-14 14:29:40

Test Laboratory: TMC, Beijing, China

DUT: Dipole 2450 MHz; Type: D2450V2; Serial: SN: 845

Communication System: CW Frequency: 2450 MHz Duty Cycle: 1:1
Medium: Head 2450MHz
Medium parameters used: f = 2450 MHz; σ = 1.87 mho/m; ε_r = 39.9; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3617; ConvF(7.19, 7.19, 7.19); Calibrated: 09.07.10
- Electronics: DAE4 Sn771; Calibration: 21.11.10
- Phantom: 2mm Oval Phantom ELI4; Type: QDOVA001BB
- Measurement SW: DASY5, V5.0 Build 119.9; Postprocessing SW: SEMCAD, V13.2 Build 87
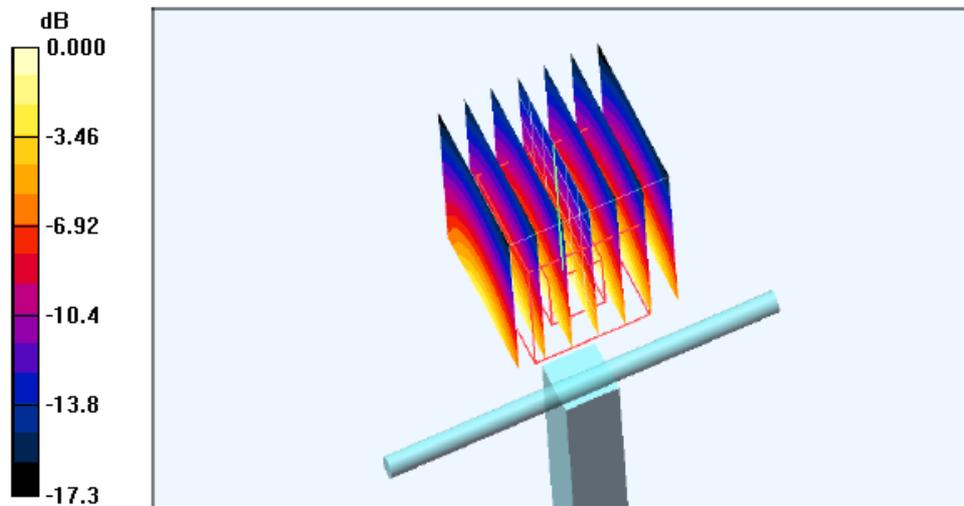
Pin=250mW; d=10mm/Zoom Scan (7x7x7)/Cube 0:

Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 92.5 V/m; Power Drift = 0.066 dB
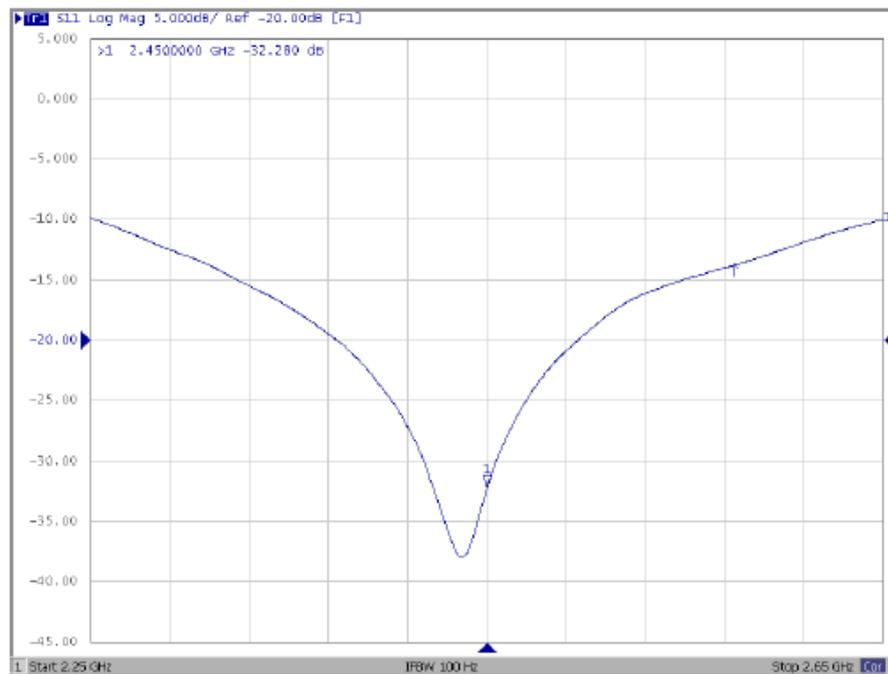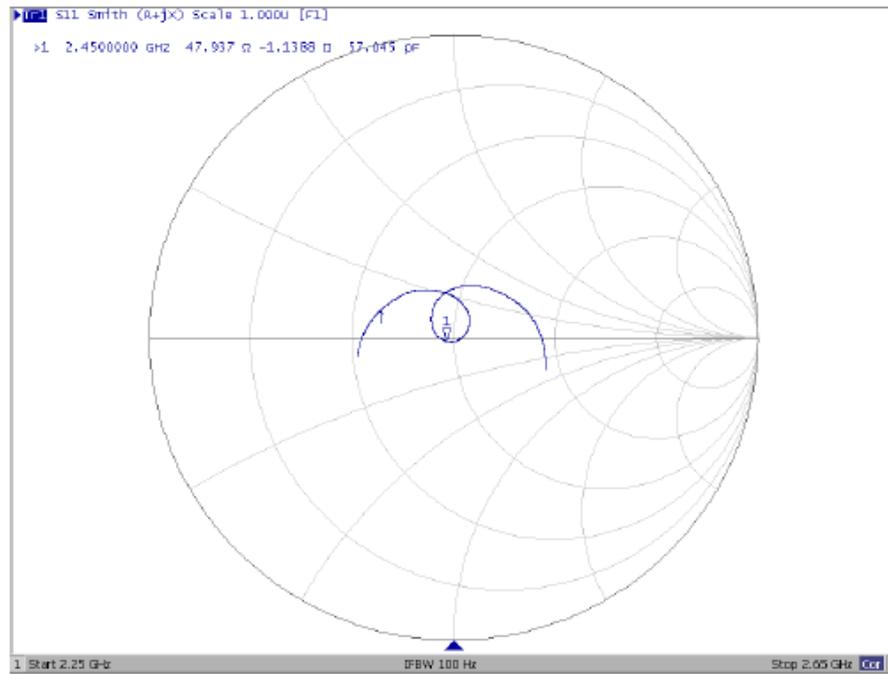Peak SAR (extrapolated) = 26.4 W/kg
SAR(1 g) = 13.3 mW/g; SAR(10 g) = 6.05 mW/g
Maximum value of SAR (measured) = 16.0 mW/g

0 dB = 16.0mW/g

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Impedance Measurement Plot for Head TSL

DASY5 Validation Report for Body TSL

Date/Time: 2011-6-14 13:50:27

Test Laboratory: TMC, Beijing, China

DUT: Dipole 2450 MHz; Type: D2450V2; Serial: SN: 845

Communication System: CW Frequency: 2450 MHz Duty Cycle: 1:1
Medium: Body 2450MHz
Medium parameters used: f = 2450 MHz; σ = 1.94 mho/m; ε_r = 51.0; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 – SN3617; ConvF(6.88, 6.88, 6.88); Calibrated: 09.07.10
- Electronics: DAE4 Sn771; Calibration: 21.11.10
- Phantom: 2mm Oval Phantom ELI4; Type: QDOVA001BB
- Measurement SW: DASY5, V5.0 Build 119.9; Postprocessing SW: SEMCAD, V13.2 Build 87

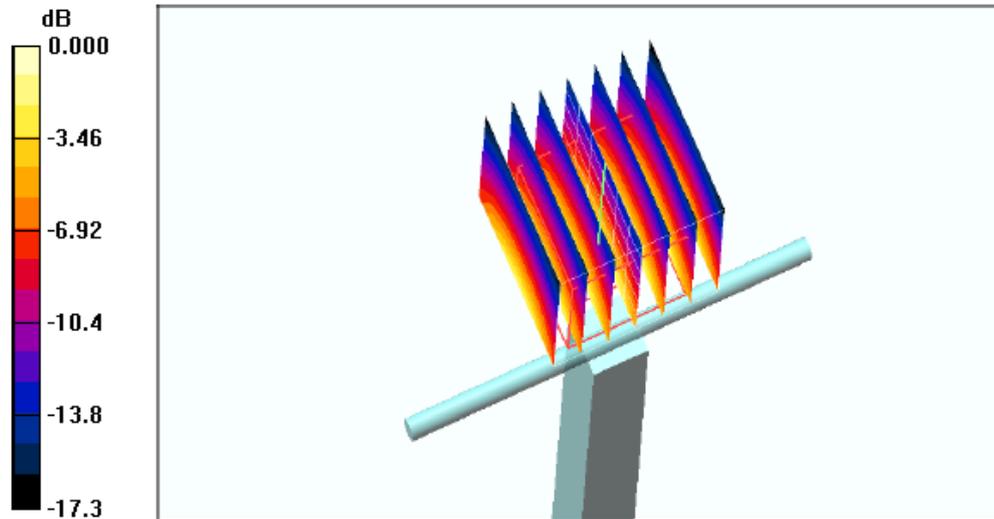**Pin=250mW; d=10mm/Zoom Scan (7x7x7)/Cube 0:**

Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 88.2 V/m; Power Drift = −0.075 dB
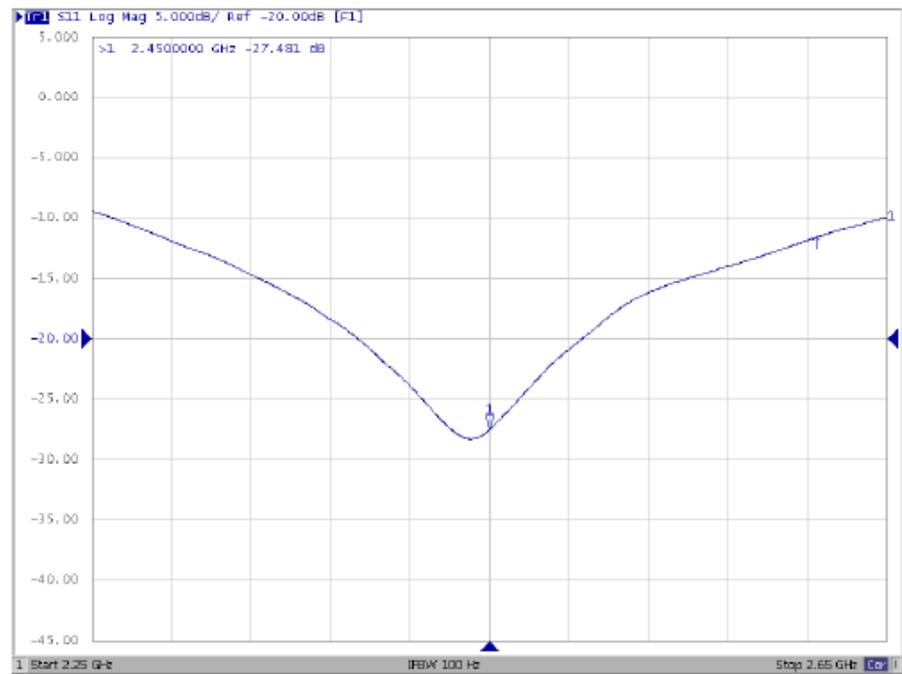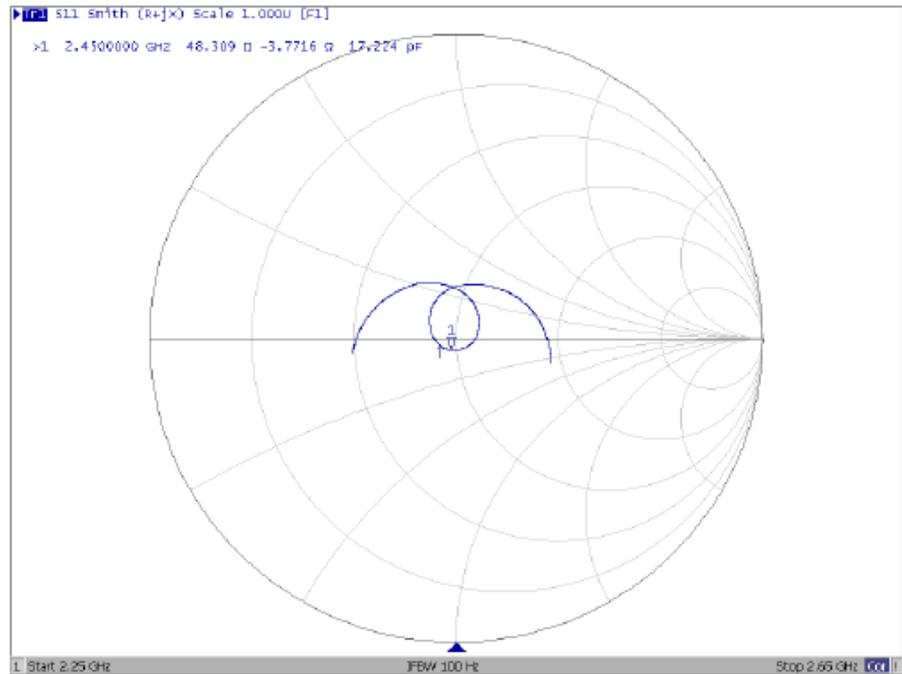Peak SAR (extrapolated) = 24.8 W/kg
SAR(1 g) = 13.1 mW/g; SAR(10 g) = 6.14 mW/g
Maximum value of SAR (measured) = 15.7 mW/g

0 dB = 15.7mW/g

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Impedance Measurement Plot for Body TSL

S11 Smith (R+jX) Scale 1.000U [F1]
>1 2.4500000 GHz 48.309 Ω −3.7716 Ω 17.224 pF

1 Start 2.25 GHz   IFBW 100 Hz   Stop 2.65 GHz

S11 Log Mag 5.000dB/ Ref −20.00dB [F1]
>1 2.4500000 GHz −27.481 dB

1 Start 2.25 GHz   IFBW 100 Hz   Stop 2.65 GHz

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---END OF REPORT---